



INSIGHTSIAS

SIMPLIFYING IAS EXAM PREPARATION

- IAS SELF STUDY GUIDE -

INSIGHTS into EDITORIAL

JUNE 2018

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TABLE OF CONTENTS

INSIGHTS into EDITORIAL	3	16. Poverty and Health	36
1. A Maritime Stretch: Modi in Southeast Asia	3	17. Wanted, a National Rubber Policy (NRP)	38
2. On the Cauvery issue	4	18. Countering China in the Indo-Pacific	40
3. Paper chase: The need to review use of VVPATs	7	19. Parched or polluted: on India's water crisis	42
4. Policy on biofuels: Green push?	9	20. The seeds of sustainability	44
5. Achieving universal health coverage in India	11	21. Cost of the missing women in Indian politics	46
6. About a small Mauritian island	13	22. To reform the Education system	48
7. Available, accessible, but not stable	15	23. Building India's green finance ecosystem	49
8. To be an environmental world power	17	24. The tools for counting	51
9. An unexceptional economic performance	19	25. For nutrition security: On undernourishment	53
10. Open data, open government	22	RSTV, LSTV, AIR - SYNOPSIS	56
11. Government opens doors to lateral entry	24	1. Pokhran II	56
12. The government needs to handle public sector banks with care	26	2. SCO Summit	57
13. A plastic charter	29	3. S 400 Air Defence System	59
14. key to successfully managing groundwater in India	31	4. Artificial Intelligence in India	61
15. How digitisation can drive growth in India	33	5. The Science of Monsoon	63
		6. Powers of Governor & Lt Governor	64

INSIGHTS into EDITORIAL

1. A MARITIME STRETCH: MODI IN SOUTHEAST ASIA

Context:

- Prime Minister Narendra Modi's visit to Southeast Asia has **the potential to spark a new period of maritime cooperation** between India and Indonesia.
- An uptick in India-Indonesia relations will be a welcome development through their respective '**Global Maritime Fulcrum**' and '**Act East**' policies have envisaged sharper maritime collaboration in the region.
- The India and Indonesia shared the view on **the imperative need to eradicate radicalism** and reiterated the importance of **promoting peaceful pluralism** that would lead to true civilisation harmony, and moderation through a holistic approach.

India and Indonesia Relationship:

- Highlighting "**strong**" **bilateral relationship** between both the countries. Both India and Indonesia have a **sensitive outlook** when it comes to helping those in need. They do not see the colour of anyone's passport, they help their fellow humans who **require any assistance**.
- The Prime Minister used the opportunity to announce that India is making arrangements for **free of cost visa for Indonesian citizens** for travel of up to 30 days.
- Prime Minister Modi also heaped praises on the **Indian diaspora in Jakarta** and recognised their "**commitment**" **towards keeping their Indian heritage alive**.
- PM praised that they are equally committed to their roots in India. Prime Minister said that **India's Act East Policy** and the **vision of SAGAR** (Security and Growth for all in the Region) matches President Widodo's **Maritime Fulcrum Policy**.
- He also said that India and Indonesia will double their efforts to take **bilateral trade to USD 50 billion by 2025**.
- The two countries signed 15 agreements including on the **cooperation in the field of defence, space, science and technology, railways and health**.

China, the common concern for India and Indonesia:

- Recently, there is an offer from the Indonesian government to grant India access to its **Sabang port** for the **development of the port and an economic zone**. Located at the mouth of the **strategically important Strait of Malacca**, Sabang is only 100 nautical miles from the southern tip of the Andaman and Nicobar Islands.
- India and Indonesia share **multiple common concerns**, one of which is **China's growing maritime footprint** in the eastern Indian Ocean. Sabang, with its naval base, naval air station, and maintenance and repair facilities, has the potential to serve as the focal point of a budding strategic partnership between the two countries.
- Both countries value the key **sea lines of communication (SLOCs)** that connect the Indian Ocean to the Pacific, and therefore the **foundation of any strategic partnership** will rest on how they both seek to manage the region's strategically important chokepoints.
- The strategically important **Straits of Malacca, Lombok and Sunda** fall under the Indian Navy's primary area of interest, and access to Indonesian naval bases such as Sabang will significantly **enhance the Indian Navy's ability** to maintain a forward presence and monitor movements in the Straits of Malacca.

Indonesia and China:

- Indonesia too has started recognising the benefits of a closer strategic partnership with India but the territorial dispute between China and Indonesia **in the Natuna Sea** is an issue that is close to Indonesia, and a strategic alignment with India will help Jakarta balance some of the security concerns emanating from Beijing's **aggressive stance in the South China Sea**.

Areas of engagement: India and Indonesia:

- Indonesia, on its end, will also seek to negotiate the delimitation of the exclusive economic zone shared by the two nations in the Andaman Sea.
- Additional facets of this partnership can involve **information sharing on white shipping**, and enabling India to partner Indonesia in **tracking commercial cargo ships at choke points** such as Malacca which are getting increasingly congested.

- In the past, cooperation between India and Indonesia has been limited **to anti-piracy patrols, search and rescue exercises and joint hydrographic exploration.** It is important for the two countries to move to a more concerted and intensive engagement.
- India should leverage this opportunity and seek its **inclusion in the Malacca Strait Patrols programme.** India's inclusion in the programme would augment India's existing maritime domain awareness in the region, while **the eyes-in-the-sky component** will allow India to jointly patrol the region with its maritime surveillance aircraft.
- India's ability to monitor Chinese naval movements in the locale will be a great boost to the Indian Navy's security missions. Moreover, access to **the Jayapura naval base in West Papua** will expand the Indian Navy's operating capacity in the Western Pacific, and complement Indian access to French naval bases in French Polynesia and New Caledonia in the Southern Pacific.
- The **comprehensive defence cooperation agreement** that is expected to be signed between the countries can possibly be a multifaceted logistical agreement — on the lines of the deal which India signed with France.
- **Mutual logistical support and reciprocal berthing rights** will facilitate a more intimate maritime security partnership. This will allow India to gain access to **naval bases in Lampung on the Sunda Strait, and Denpasar and Banyuwangi on the Lombok Strait,** augmenting the Indian Navy's operational breadth in the eastern Indian Ocean.
- At a time when countries are realigning themselves to accommodate the growing consensus around an **Indo-Pacific strategic framework**, India and Indonesia, as members of the Indian Ocean Rim Association, **need to complement each other's vision of a regional order.**

Conclusion:

- Prime Minister Mr. Modi is due to deliver the **keynote at the Shangri-La Dialogue** in Singapore and needs to use this opportunity to make public the **strategic framework of 'Act East' policy.**
- India needs to supplement **efforts in Jakarta** and leverage its **existing strategic relations with Singapore** and other like-minded regional states if it is to cement its position as a **'net security provider' in the Indian Ocean.**
- A **closer logistical partnership** with countries such as Singapore, Australia and Indonesia can be the starting point of an extensive strategic linkage that will help establish **India as a regional provider of maritime security.**
- A **strategic confluence** between New Delhi and Jakarta **needs an economic direction.** The development of the port and economic zone in Sabang can serve as **blueprint for a connectivity partnership** between the two nations, and more importantly, provide an alternative to China's Belt and Road Initiative.

Way Forward:

- The **proposed cruise tourism circuit** between the Andaman and Nicobar Islands and Sabang would further enhance such economic linkages.
- Additionally, a partnership that includes collaboration in **defence industries and maritime training and education** can ensure a dynamic maritime collaboration.
- Today, Modi and Jokowi have the opportunity to build a **peaceful and prosperous "maritime mandala"** in the heart of the Indo-Pacific through a number of steps. These include developing shipping links, building new ports, promoting a **blue economy in the Andaman Sea**, and advancing **cooperative security framework** for the Malacca Straits and the Bay of Bengal.
- The time has come for India to **realise the potential of a strategic alignment** with the Indonesia that is geopolitically positioned at the centre of the Indo-Pacific, and an upgrade in maritime relations is the **logical way forward.**

2. ON THE CAUVERY ISSUE

Introduction:

- We are having **more than 80 per cent** of Indian rivers are **inter-state rivers.** According to the Central Water Commission, there are **125 inter-state water agreements** in India. Many of these agreements are more than 100 years old and had been executed without seriously considering **socio-economic, political and geographical factors.**
- These treaties have now become **permanent sources of problems** for many states. **Continuous redrawing of state boundaries** during the British regime and after Independence have kept the disputes alive.

Cauvery, the 'Dakshina Ganga':

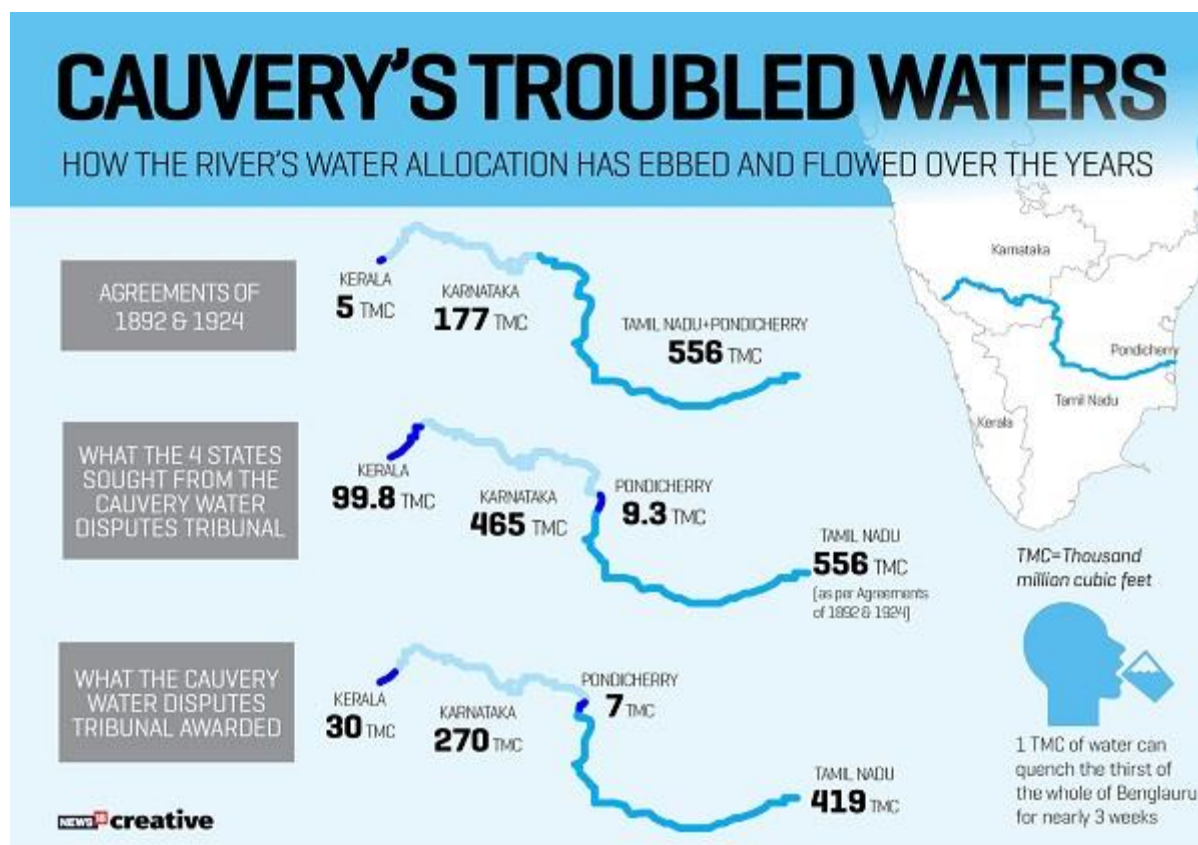
- **Cauvery**, Ganges of the south, and **the fourth largest river of southern India** has been the economic backbone of the states through which it flows, making its impact felt most strongly in **Karnataka and Tamil Nadu**. In these two states, the river is almost the Mother Goddess, entwined with the identity of the people there.
- It is celebrated in music and literature and sung praises of in prayer and legends. Yet this same holy river has been the **bone of contention between the two states** for decades.
- Cauvery water dispute case is a classic example showcasing complicated scenario of **river water management and governance in India**. When there is shortage, when developmental projects grow, and riparian States do not enjoy equal access to the source, **inter-state problems** are bound to rise in sharing.

Context:

- The centre recently, constituted the **Cauvery Water Management Authority** in compliance with a Supreme Court order to address the water dispute involving the states of **Kerala, Karnataka, Tamil Nadu and Puducherry**.
- A notification by the Water Resources Ministry said the authority will be headed by a chairman and it will have two whole time and as many part time members. While the whole time members will be appointed by the centre, the other two will be nominated by it.
- Besides this, the four states will nominate one representative each as additional part time members of the committee.

Central Government on Cauvery issue:

- As mentioned above, Centre had submitted a **draft Cauvery water management scheme** in the Supreme Court which proposes for an independent authority.
- The new authority is **to monitor implementation** of the Cauvery Tribunal's final award. It will be a two-tier structure, with an apex body charged with the power to ensure compliance with the final award, and a **regulation committee** that will monitor the field situation and water flow.
- The powers and functions of the authority are **fairly comprehensive**. Its powers would extend to apportionment, regulation and control of Cauvery waters, supervision of operations of reservoirs and regulation of water releases. The draft makes the **authority's decisions final and binding**.



Lesson from international treaties:

- The **water distribution agreement** proposed by the World Bank in 1960 continues to be the basis of the **Indus Water Treaty**. The **permanent Indus Commission** regularly exchanges information and ensures cooperation between India and Pakistan on the use of river waters amicably.
- The **US-Mexico International Boundary and Water Commission** has been successfully implemented since 1884 with the changing course of the rivers, the **Rio Grande and Colorado**.
 - This treaty has been amended more than seven times since its inception, based on the changes in irrigation uses, river boundaries, flood control, population growth, urbanisation, etc. The sharing of water during surplus and drought years is based on a **five-year cycle of water flow data**.
- For Cauvery river, **Supreme Court** Recommended that Speedy establishment of **Cauvery Water Management Board** which should include eminent water technologists and agriculture specialists in the management board to help
 - Ensure **greater economy and equity** in the sharing of the Cauvery water
 - Look into the **water efficiency measures** involving recycling of water

Local Governance and People's Participation:

Demand management: There is a need for the basin states to reduce the demand for water by adopting

- **Cropping patterns** which are suited to local areas based on soil testing and adapting less water-intensive crops.
- **Drip irrigation** and other water-saving techniques, paying attention to crops which are in demand in the market and which can enhance the income of farmers per unit of water.

Supply augmentation:

- **Make rainwater harvesting** mandatory as Tamil Nadu is a rain shadow region and water becomes available largely during the north east monsoon period. There is a large scope for water harvesting and storage.
- Set up a **Water Security Board** in order to derive maximum benefits by following transparency in allocation and distribution.

Urban Planning:

- Urbanization has altered both **quantity and quality of our water resources**, it is important that **proper urban and water planning** are taken into consideration. For instance, In Chennai, most of the apartments and Townships are constructed in **wetland and lake modified areas**.

Next Steps should be:

- For **effective settlement** of these disputes, equitable sharing of benefits is more important than equitable distribution of water. The **principle of downstream benefit-sharing** is crucial for the successful implementation of these treaties.
- Further, **water-sharing principles** will have to be based on the *size of the river basin, population growth, historical claims, efforts taken by the state governments for water conservation, rainfall and changes in cropping patterns, scientific use of water, priority for agriculture, allocation for industry and power generation, flood control and domestic uses.*
- These issues should be given due importance in negotiations. Therefore, it may be necessary to have **independent or mutually agreed third parties** revisit disputed treaties bi or multilateral negotiations hold the key.

Conclusion:

- The **Indo-Bangladesh treaty** can be the **model for the resolution** of the Cauvery dispute. The bone of contention between Tamil Nadu and Karnataka is about sharing water during the scarce period. This dispute is alive for **more than 200 years**.
- It started **between Mysore and Madras in 1807**, which led to an **agreement in 1892 and 1924**. The linguistic re-organisation of states in 1956 triggered new problems.
- There is an immediate need to constitute a **permanent dispute settlement body** like the *JRC, JCE of Indo-Bangladesh treaty, the Indus Commission, the US-Mexico International Boundary and Water Commission etc.* for the Cauvery dispute.

- The **Cauvery Management Board** proposed by the Supreme Court may act like these bodies. The states can even re-negotiate the existing treaty, involving mutually agreed third parties like World Bank to arrive at a permanent settlement.
- In the longer term, experts will have to **devise a sustainable agricultural solution** for the Cauvery basin, as the river does not seem to have the potential to meet the farming requirements of both sides.
- In a world of depleting water resources, fewer crop seasons and lower acreages, a resort to **less water-intensive crops and better water management** hold the key.
- It is time that **water issues are de-politicised** and political parties learn to see reason and respect the rule of law without getting carried away by electoral considerations. The Central government has got a golden opportunity on Cauvery **to set a new, healthy trend.**

3. PAPER CHASE: THE NEED TO REVIEW USE OF VVPATS

Context:

- Recently, there is an high incidence of glitches in the **Voter Verifiable Paper Audit Trail (VVPAT)** machines in by-elections should be a **major cause of concern** for the Election Commission of India.
- Fresh polling had to be ordered in dozens of booths in Uttar Pradesh and Maharashtra as a consequence.

What are VVPAT machines?

- The Voter Verified Paper Audit Trail is a method that **provides feedback to voters.**
 - It is an **independent verification printer machine** and is attached to electronic voting machines.
 - It allows voters to verify if their vote has gone to the intended candidate.

How do VVPAT machines work?

- When a voter presses a button in the EVM, a **paper slip is printed through the VVPAT.**
 - The slip contains the poll symbol and name of the candidate.
 - It allows the **voter to verify his/her choice.** After being visible to the voter from a glass case in the VVPAT for **seven seconds**, the ballot slip will be cut and dropped into the drop box in the VVPAT machine and a beep will be heard.
 - VVPAT machines can be accessed by **polling officers only.**
- VVPAT is a machine which dispenses a slip with the symbol of the party for which a person has voted for. **The slip dropped in a box but the voter cannot take it home.**

Advantages in VVPATs:

- Enables to verify vote: Instant feedback to voter that vote polled has been allocated to the intended candidate
- Enables authorities to count the votes manually if there is a dispute in the electronically polled votes
- Operates under a Direct Recording Election system (DRE) which detects fraud and existent malfunctions
- Will ensure greater transparency in voting process
- Gives both the voters and political parties an assurance

Concerns in implementation of VVPATs:


- Since the implementation of the VVPAT system last year, **machine malfunction** and **subsequent delays** in polling have been recurring issues. **Close to 4.2% of the VVPAT machines** deployed in the Karnataka Assembly elections **developed glitches** during the testing as well as polling processes. The overall **fault rate was as high as 11.6%** in the by-elections held in four parliamentary and nine Assembly constituencies.
- The ECI has suggested that these machines were **more prone to malfunctioning** due to their sensitivity to **extreme weather conditions** and **exposure to light.** It also blamed the **relative inexperience of polling officers** handling them, compared to the ballot and control units for the electronic voting machines (EVMs) that have been in use for much longer.
- The technical committee of the ECI is now faced with a challenge to ensure that the VVPAT machines hold up, with the general election due **next year in the hot summer months.** The VVPAT was added to the EVM **to audit the voter tallies stored in the machine.**
- The use of these VVPAT machines, which are adjuncts to the ballot and control units of the EVMs, has **added to the complexity** of an otherwise simple, single programmable-chip based system, and rendered it **prone to more glitches.**

- There is enough empirical evidence to show that **EVMs have eased polling and helped increase voter turnout** since being put to use. But in using VVPAT machines to reassure sceptics about an election's integrity, the ECI has introduced a new element, and cost, to the process.
- It is mostly **inadequately trained election duty staff** and not the Voter Verifiable Paper Audit Trail (VVPAT) machine that have played truant in elections, a key member of the **Technical Expert Committee** that advises the Election Commission (EC) on the **efficacy and readiness of the machines**.
- Therefore, More **intensive training** and **increasing election staff's familiarity** with the new machines are likely to address the teething troubles that are currently at the fore.

VVPATs to achieve Zero Glitches:

- A **combination of safeguards** ensures that these machines are fully tamper-proof. Broadly, these can be summed up in **four categories**:
 - **Software and Technical, Administrative, Independent technical watchdog oversight, and Judicial scrutiny.**


Q WHAT IS VVPAT?



A. Voter Verifiable Paper Audit Trail (VVPAT) helps voters to physically confirm the choice they have made. It consists of:

- A printer that gives a record of voters' selection
- A display unit that shows any error

Q HOW IT WORKS?




Q WHAT THE VVPAT SLIP CONTAINS?

A.

- A candidate serial number
- Name of the candidate
- Corresponding symbol.

VVPAT paper roll is designed for printing **1,500** ballot slips for each election

A. The printed VVPAT slip is displayed for 7 seconds before it is automatically cut and delivered to a sealed ballot compartment



Conclusion:

- Considering these challenges, the ECI should consider deploying the VVPAT machines in **a limited, statistically significant, randomly chosen set of polling booths**. This will reduce the possibility of glitches affecting the polling process as well-tested machines could be deployed (with enough replacements also handy) to such booths.
- The current verification process, after all, only involves the counting of VVPAT slips by randomly choosing one booth from each constituency and this check should not be affected drastically by the new method.
- **EVMs with VVPAT system** ensure the **accuracy of the voting system**. With intent to have fullest transparency in the system and to restore the confidence of the voters, it is **necessary to set up EVMs with VVPAT system** because vote is nothing but an act of expression which has immense importance in democratic system.

- The EVM, just as any other machine, **needs to constantly evolve** in order to remain secure and workable under any condition while at the same time keeping its operations simple. The introduction of the VVPAT tends to enable another layer of **accountability to the EVM**.

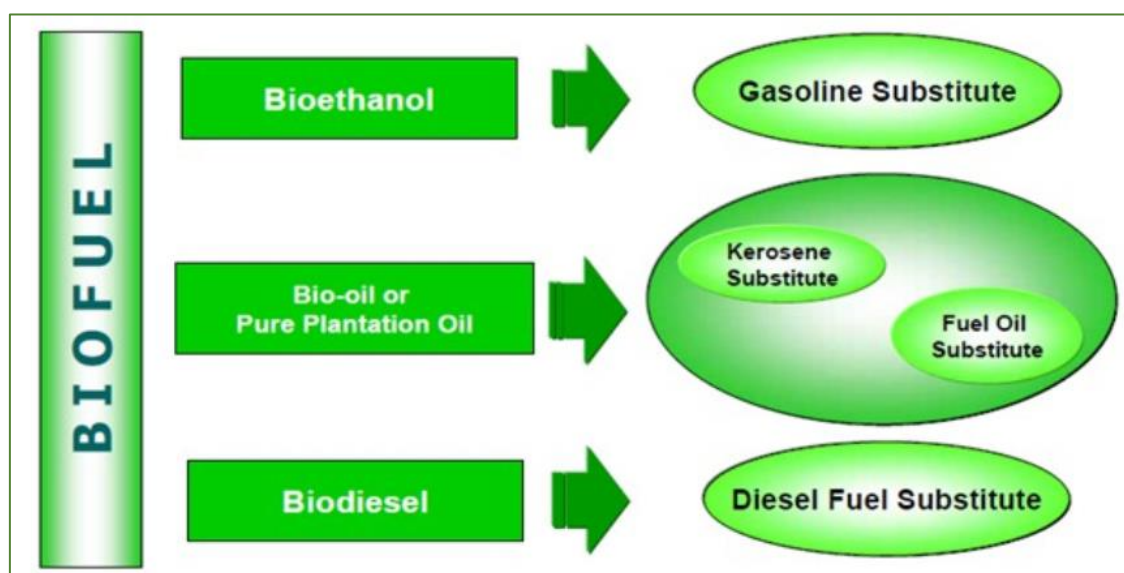
Way Ahead:

- Therefore, It is important for Election Commission to **regain trust and confidence** of all stakeholders in the **election system in India**.
- Introduction of VVPAT** is an appreciated move. However, lacunae in VVPAT technology should be immediately addressed. **Measures include** making it independent of battery, include the usage of sustainable inks and reducing sensitivity to heat and light. Employment and proper training of workforce to manage **errors and technological snags**.
- The EC announced that it will count V-VPAT slips up to a definite percentage. A **proper statistical method** should be deployed for while deciding on the required proportion of tallying V-VPAT with EVMs.
- At present it only involves randomly choosing booths. **Invest more to upgrade technology**.
- Rather than moving to paper ballot system of election, the focus should be on **improving the efficiency, credibility and transparency** of the EVM-VVPAT enabled electoral process.
- Transparency in every aspect of elections** is a fundamental necessity. Especially with a multiparty democracy and competitive politics at its rage always it is important for ECI to ensure people are **assuring the clean and Transparent process in elections**.

4. POLICY ON BIOFUELS: GREEN PUSH?

Context:

- Recently, Union Cabinet approved a **National policy on Biofuels** that seeks to not only help farmers **dispose of their surplus stock** in an economic manner but also **reduce India's oil-import dependence**.
- National policy on Biofuels** primarily tries to **address supply-side issues** that have discouraged the production of biofuels within the country. It allows for a **wider variety of raw materials** to be used as inputs to **produce ethanol** that is blended with petrol.
- The Policy **expands the scope of raw material** for ethanol production by allowing use of Sugarcane Juice, Sugar containing materials like Sugar Beet, Sweet Sorghum, Starch containing materials like Corn, Cassava, Damaged food grains like wheat, broken rice, Rotten Potatoes, unfit for human consumption for ethanol production.



Expected Benefits of National Policy on Biofuels:

- Reduce Import Dependency:** The ethanol supply year 2017-18 is likely to see a supply of around 150 crore litres of ethanol which will result in savings of over **4000 crore of forex**.
- Cleaner Environment:** For the ethanol supply year 2017-18, there will be lesser emissions of CO₂ to the tune of 30 lakh ton. By reducing crop burning & conversion of agricultural residues/wastes to biofuels there will be further reduction in Green House Gas emissions.

- **Health benefits:** Prolonged reuse of Cooking Oil for preparing food, particularly in deep-frying is a potential health hazard and can lead to many diseases. **Used Cooking Oil is a potential feedstock** for biodiesel and its use for making biodiesel will **prevent diversion of used cooking oil in the food industry.**
- **MSW Management:** It is estimated that, **annually 62 MMT of Municipal Solid Waste** gets generated in India. There are technologies available which can convert waste/plastic, MSW to drop in fuels. One ton of such waste has the **potential to provide around 20% of drop in fuels.**
- **Infrastructural Investment in Rural Areas:** At present Oil Marketing Companies are in the process of setting up twelve 2nd Generation bio refineries with an investment of around Rs.10,000 crore. Further **addition of 2G bio refineries** across the Country will **spur infrastructural investment in the rural areas.**
- **Employment Generation:** One 100klpd 2G bio refinery can contribute 1200 jobs in Plant Operations, Village Level Entrepreneurs and Supply Chain Management.
- **Additional Income to Farmers:** By adopting 2nd Generation technologies, **agricultural residues/waste** which otherwise are burnt by the farmers can be **converted to ethanol** and can fetch a price for these waste. Also, farmers are at a risk of not getting appropriate price for their produce during the surplus production phase. Thus **conversion of surplus grains and agricultural biomass can help in price stabilization.**

Biofuel Policy Success will depend on the details:

- At present, the technology available a **large chunk of the biofuel** will have to come from the sugar sector for now. Therefore, **pricing is the key.** As mentioned above, the government estimates that ethanol supply of around 150 crore litres in 2017-18 could save foreign exchange worth over ₹4,000 crore.
- The production of biofuels from agricultural waste, it is hoped, will also **help curb atmospheric pollution** by giving farmers an incentive not to burn it, as is happening in large parts of northern India.
- But policy should not get ahead of **technological and financial feasibility** and **options should be realistically laid out for farmers.**
- There is also a **need for caution in using surplus foodgrain** to produce ethanol. **Food for fuel** has often been a controversial policy matter across the globe as many believe using grains for ethanol raises food inflation risk.
- And while removing the shackles on raw material supply can have definite benefits, it cannot make a significant difference to biofuel production as long as the **supply-chain infrastructure** that is required to deliver biofuels to the final consumer **remains inadequate.**
- To address this issue, the new policy **envisages investment** to the tune of ₹5,000 crore in **building bio-refineries** and offering other incentives over the next few years. The government should also take **steps to remove policy barriers** that have discouraged private investment in building supply chains.
- The policy has also encouraged **setting up of supply chain mechanisms** for bio-diesel production from non-edible oilseeds, used cooking oil, and short gestation crops.
- According to a **Bloomberg New Energy Finance** study **Next-Generation Ethanol: What's In It For India?**, the increase in ethanol production alone has the potential to **create over 700,000 jobs** when targeting only the base potential. States with a **combination of high agricultural activity and large fuel consumption** like Maharashtra, Punjab and Uttar Pradesh would be the best positioned to exploit this opportunity.
- We need measures which are available today and **at affordable costs.** This one measure of pushing for biofuel buses for public transport within a specific timeline like 2020, would **help transform our public transport services, improve the health of our citizens, provide economic impetus and create jobs.** Surely a win-win proposition at a fraction of the cost associated with the **subsidy-driven push being planned for E-mobility.**
- When **sustainability focused countries** like Sweden and a developing country like Brazil have used ethanol in a big way to achieve their environmental and economic objectives, India must make efforts to scale up technology alternatives.

Conclusion:

- Biofuels in India are of **strategic importance** as it augers well with the **ongoing initiatives** of the Government such as Make in India, Swachh Bharat Abhiyan, Skill Development and offers great opportunity to **integrate with the ambitious targets** of doubling of Farmers Income, Import Reduction, Employment Generation, Waste to Wealth Creation.
- **Biofuels programme in India** has been largely impacted due to the sustained and quantum non-availability of domestic feedstock for biofuel production which **needs to be addressed.**

- Sustainability, with its **multiple environmental, economic and social objectives**, is now prominent in many national and international policies.
- These are implemented in a classical incrementality approach. Using the example of biofuels to demonstrate the way that **multiple objectives are developed in energy and environmental policy**.
- Biofuels are promoted as replacements for transport fuels, but biofuel policy is also geared **towards socio-economic goals** such as agricultural subsidy and strategic goals such as security of energy supply.
- With a **holistic approach**, which includes the full potential of biofuels for vehicles, we will be able to achieve our dream of **creating an environmentally and economically sustainable transport sector**.

5. ACHIEVING UNIVERSAL HEALTH COVERAGE IN INDIA

Introduction:

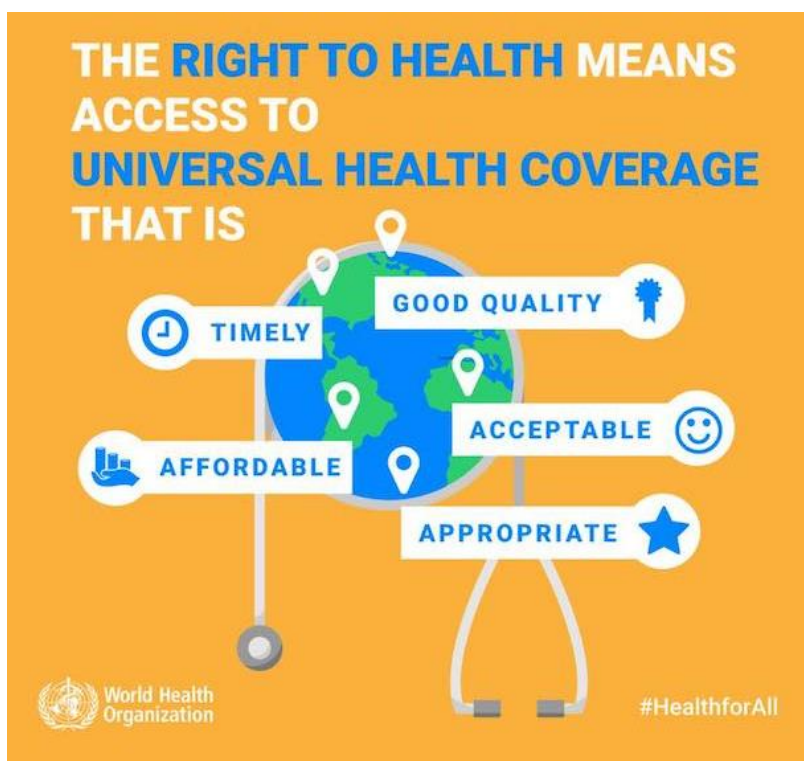
- The World Health Organization (**WHO**) **Health Assembly** set the target of “**Health for All**” in **May 1977**. These were to be achieved by the end of 2000. Subsequently, in 2000, the **Millennium Development Goals** were formulated by the UN with the target for achievement set for 2015.
- This was followed by the Sustainable Development Goals (**SDG**), **set by the UN in 2016, to be achieved by 2030 by all member countries**.

Context:

- In fact, Recently happened **71st World Health Assembly in Geneva** deliberated on the importance of environmental, climate and other determinants of health.
- **Known avoidable environmental risk factors** cause at least 13 million deaths every year and about one quarter of the global burden of disease.

What are the major problems of Health sector in India?

- After the independence the focus has been increased significantly on Health status of people. As a result, there has been a significant increase in life expectancy of people **from 35 years to 65 years**.
- However, it is **unevenly distributed** in different parts of the country. The health problems in India are still a **cause of concern**.
- As the income levels of the people have increased there is **spurt in non-communicable or life style diseases** which accounted for nearly half of the deaths.
- The **existing healthcare infrastructure** is just not enough to meet the needs of the population. The central and state governments do offer universal healthcare services and free treatment and essential drugs at government hospitals.
- However, the hospitals are **understaffed and under-financed**. People living below poverty line continue to rely on **insufficient health care facilities** in rural areas.
- India has one of the **lowest per capita healthcare expenditures** in the world. The **high out-of-pocket expenses** in India stem from the fact that majority of Indians do not have health insurance.
- Moreover, majority of the **skilled health care professionals** happen to be concentrated in urban areas. This is the main reason for **rural- urban disparity** in terms of healthcare.



Healthcare challenges in India:

- The country's diversity in terms of geography, culture, and demography
 - Political system
 - Unsafe boundaries
 - Huge population burden
 - Poor investment in health
- ❖ Changing the **behaviour pattern** of the Indian masses, including the patient population, is something which has been focused upon much yet.
- ❖ Access to **readily reachable, trustworthy and affordable health care** is a major challenge before poorly served rural areas and overcrowded urban areas.
- ❖ Also, the inadequacy of organised **primary health services** here is compounded by a weakness at the intermediate level of care in many district hospitals and nursing homes.
- ❖ While corporate hospitals boast of high quality advanced care and compete with each other for a significant share of medical tourism, they are mostly **inaccessible** to the rural population and the urban poor. Government institutions of advanced care suffer from **low budgets and a lack of managerial talent**.

Importance of Universal Health Coverage in India:

- The health goal under the **United Nations Sustainable Development Goals** is, arguably, the most important target on the agenda of India and other member countries because of **its inextricable connection** with other indicators of **socio-economic development** like poverty, zero hunger (nutrition), quality education, gender equality, clean water and sanitation.
- The essence of this goal is **to "ensure healthy lives and promote well-being for all in all ages"**, which implies universal health coverage.

Definition of Health and well-being:

- A determinant-based **definition of health and well-being** will not only help in better perception of disease, but also **provide a better tool** in deciding the right priority for public health interventions.
- **Diseases of public health importance**, such as kala azar, lymphatic filariasis, leprosy, etc., can manifest in an apparently healthy population in tropical and sub-tropical climatic regions and can re-emerge if not eliminated.
- While there has been **tremendous progress** in addressing neglected tropical diseases in many countries, including India, due to concerted efforts of the government, elimination efforts are still to be universalized across many districts.
- These diseases shouldn't be neglected any more, even though the magnitude of reported cases has reduced over the years. The countries affected by neglected tropical diseases must **intensify efforts to achieve elimination** that is validated and universal care for disabled persons.

Need to redefine the definition of Health:

- Viewed **through this holistic lens**, the revised definition of health should include all such determinants and **be redefined** as "a state of complete physical, mental, social and environmental well-being, including absence of determinants of disease in the body or in its proximity that can cause harm by use or by contact with the body".

Making private practitioners an important part of the public healthcare:

- It is counterproductive to insist that private practitioners should not be an integral part of the overall government effort **to provide good healthcare** to people.
- Such an insistence makes the notion of maintaining disease-specific countrywide registers in which individual doctors and hospitals participate almost impossible.
- **A truly universal healthcare system** is driven by protocols that care for the patient and integrate all practitioners. Once such a system is put in place along with **regular reporting**, the distinction between private and public becomes meaningless.
- To successfully put **care and quality back into healthcare**, it is important to set up this kind of system to track the health status of patients. This will help remove **smoothen the public-private healthcare debate**.

Conclusion:

- It is high time for UN bodies/World Health Assembly to acknowledge the **need for redefining health in light of the SDGs**.
- Universal health coverage should be designed based on the **revised definition of health**. That will lead to a better understanding, and attainment, of holistic health and well-being. This will help in **directing focused priority and mobilization of resources** in the right direction.
- In addition, a **National framework for universal health coverage** needs to be developed by the member countries. This would involve **inter-sectoral collaborations** at the community level with local health teams, the private sector, non-government organizations and community-based organizations to **strengthen primary health and support secondary and tertiary infrastructure**.
- This would not only **ensure proper and complete treatment** but also empower people to protect themselves from illness and encourage treatment-seeking behaviour for which people's awareness needs to be built up through simple community-level ideas for health **promotion, prevention and self-protection** as essential part of primary healthcare.
- **Joint participation** with health teams by trained volunteers in uniform, including those from National Cadet Corps (NCC), National Scout Services (NSS), nursing schools, etc., can **provide a thrust for addressing** social, and environmental determinants and can bring about positive change in personal hygiene, healthy behaviour and cleanliness. Approaching healthcare policies from the **behavioural angle** can ensure **better systemic efficiency and large-scale transformation**.
- History is full of examples of governments empowering their people to propagate a holistic approach to what we now term universal health coverage. In the **third century BC, emperor Ashoka** is believed to have said, "I am going to propagate medicinal herbs throughout my kingdom to **ensure complete accessibility to all my subjects** as it is my ethical responsibility to provide good health to all people."
It is time, clearly then, to let history repeat itself.

6. ABOUT A SMALL MAURITIAN ISLAND

Background:

- In 2015, Prime Minister Narendra Modi and his Mauritian counterpart Anerood Jugnauth signed an agreement that **allows India to "develop infrastructure"** on the Mauritian islands. The phrase is a euphemism for the building of military bases, which India is doing not only on **Agaléga** but also on **Assumption Island (Seychelles)**.
- **Context:**
- Recently, a group of Mauritians, Rodriguans and Agalégans met to form the **Koalision Zilwa Pou Lape (Islanders Coalition for Peace)**. They have called for the **Indian Ocean** to be declared as a **"zone of peace"**.

Mauritian archipelago of Agaléga:

- Mauritius is the largest source of FDI into India, since multinational corporations have been able to take advantage of the **India-Mauritius Double Taxation Avoidance Treaty** and the lax tax regime to avoid paying taxes.
- After having given over Agaléga, Mauritius signed an **amended treaty on taxes** and **by 2019 will effectively lose its status** as the main funnel for FDI into India.
- Agaléga, which was the price for the extension of the treaty, will now be surrendered without benefit.

Three hundred people live on the small **Mauritian archipelago of Agaléga**. They watch as their home is turned slowly into an Indian naval base. There is little that they can do. The government of **Mauritius** knows that there is far more to be gained from India than from the people of Agaléga.

Mauritius is one of the main routes for foreign direct investment (FDI) into India. It earns Mauritius a considerable fortune in fees as money that is enough for Mauritius to renege on its pledge to its own citizens.

India and Mauritius:

- The agreement covers within its purview our shared efforts in **anti-piracy operations**, and enhanced **EEZ surveillance** to prevent intrusions by potential economic offenders including those indulging in illegal fishing, poaching, drug and human trafficking.
- In a recent FTA, two trading partners cut or eliminate duties on majority of goods besides liberalising norms to **promote services trade and boost investments**.

- According to experts, India may not get huge benefit in goods sector as Mauritius is a small market, but **services sectors such as IT and tourism** hold huge potential to enhance economic ties.
- Island nation Mauritius is the top source of foreign direct investment (FDI) into India. In 2016-17, India received USD 15.72 billion.

Indian Ocean as a Zone of peace:

- The idea of the Indian Ocean as a **demilitarised area** is not anachronistic. In 2014, National Security Adviser Ajit Doval evoked the **idea of the zone of peace** in his speech at the Galle Dialogue in Sri Lanka. What did he have in mind is: A Chinese submarine had docked in Colombo, which raised the hackles of India.
- Solidarity with the people of Agaléga, as well as those in Chagos (Diego Garcia) and Assumption (Seychelles), animates **Islanders Coalition for Peace** group. They have called for the Indian Ocean to be declared as a “**zone of peace**”.
- The “zone of peace” idea takes us back to the 1970 **Non-Aligned Movement (NAM) summit in Lusaka, Zambia**. Various NAM members called upon all states “to respect the Indian Ocean as a zone of peace from which Great Power rivalries and competition, as well as bases” be excluded.
- For the U.S., the “zone of peace” was a “**very dangerous idea**”. France, still a colonial power, did everything to stop this idea; **La Réunion**, south-west of Mauritius, became the centre of **French naval military operations** in the Indian Ocean after Djibouti won its independence from France in 1977. Nonetheless, the UN General Assembly voted a **resolution in 1971** on the **Declaration of the Indian Ocean as a Zone of Peace**.
- Zone of peace promotes the economy of this Indian Ocean countries as these are **heavily dependent on tourism**. The country receives about 3-4 lakh tourists a year a year, roughly three times of its population. The **direct share of tourism** in the economy 27 per cent, which goes up to 62 per cent if the indirect contribution is factored in



Keeping pace with China:

- In its “**string of pearls**” policy, China has built significant relations across the Indian Ocean, **from Gwadar (Pakistan) to Hambantota (Sri Lanka) to Kyaukpyu (Myanmar)**. A rattled India wants to exert itself in the same region and has developed reciprocal agreements with Australia, France and the U.S. to take advantage of bases as far flung as **Cocos Islands (Australia) and La Réunion (France)**.
- Nuclear-armed ballistic missile submarines from **India (Arihant)** and **from China (Song, Shang and Jin)** will soon ply these waters. They will join the **Ohio class (U.S.)** and the **Rubis class submarines (France)** that already operate here.
- China and India are bit players in the Indian Ocean. The main naval facilities here are held by the U.S.; their own string of pearls runs **from Bahrain to Singapore**. In the middle of this arc is **Diego Garcia**, from where Afghanistan and Iraq were bombed.
- Focus on the rivalry between China and India misses the long-standing problem concerning the U.S., which was the **focus of the Lusaka resolution**. In Lusaka, the NAM resolution said this base constituted “a direct threat to the **independence, sovereignty, territorial integrity and peaceful development** of States of the region”. It remains a threat in exactly this way.

Conclusion:

- The **Islanders Coalition for Peace** statement evokes the full measure of the NAM statement but also goes beyond that. It speaks of the need to **recognise the people of the Indian Ocean** as one people with a “**common past and a common destiny**”; where the **waters are treated as common property** rather than as corporate and military property.
- Many small islands in Indian ocean have been historically exploited as Naval bases and there have been genuine apprehensions about India also building a Naval Base there.
- Therefore, India should help **Indian Ocean littorals** as part of capacity and capability enhancement in **strengthening their maritime domain awareness capabilities**.
- These stations will be eventually integrated with **India’s coastal monitoring network** to give wide coverage of the Indian Ocean region. India will not only have to more creatively reimagine **its strategic geography** but also evolve **new terms of engagement** with its neighbours in the Indian ocean terms which reflect the reality of our times in which both India and its neighbours can have a stake in each other’s success.

Way Ahead:

- Indian Ocean region is the **primary area of concern** for India. Securing its position here is vital before venturing elsewhere. For India, geographically the area of concern, and so the area of focus, should remain the IOR, **stretching from the Gulf of Aden to the Strait of Malacca**.
- While reiterating its commitment to upholding the established laws of the global commons, New Delhi should not go adrift in the larger Indo-Pacific. As more powers make inroads into this **strategically crucial space**, India must **consolidate its position** and not expect others to do its job, for it would only mean ceding space in the long run.
- India, with its **strong intelligence network**, will also be helpful in maritime law enforcement by Mauritius and Seychelles.
- While declaring support for India’s maritime security plans, there is need to pointed out that small nations are **equally important** in the contemporary world order and need to be taken seriously for the **sa^ke of preserving the security and order**.

7. AVAILABLE, ACCESSIBLE, BUT NOT STABLE**Introduction:**

- The **Right to food** is a well-established principle of **international human rights** law. It has evolved to include an **obligation for state parties to respect, protect, and fulfil their citizens’ right to food security**.
- Our current understanding of food security includes the **four dimensions of access, availability, utilisation and stability**.
- As a state party to the Universal Declaration of Human Rights and the International Covenant on Economic, Social and Cultural Rights, India has the obligation to ensure the **right to be free from hunger and the right to adequate food**.



Emergence of Food Security over the time of Independence:

- Broadly speaking, attitudes towards **food security** in India can be divided into **two generations** subsequent to Independence. While the demarcation is far from exact, it indicates how the importance given to different elements of food security altered over time.
- The years post-Independence were turbulent for India. Memories of the **Bengal famine** remained fresh and fears of a food shortage were rampant. Hunger was thought to be a function of inadequate food production.
- In 1974, the **World Food Conference** defined food security primarily in terms of production — as the “availability at all times of adequate world food supplies.”
- It is arguable that the framing of **food security in quantitative terms** sparked India’s determination to initiate the **Green Revolution to boost food production**. While the programme achieved dramatic increases in rice and wheat production in some parts of the country, its **devastating environmental impact** has also rightly been critiqued.
- Two occurrences over the 1980s and 1990s set the stage for what we understand as food security in India today. The first was when the **Supreme Court** dramatically expanded the ambit of **rights that citizens could claim against the state**.
- While no explicit ‘right to food’ could be made out, there was an increased mention of food as being among a cluster of basic rights integral to human dignity. The second was a shift of the frame from the **problem of availability to the problem of access**.
- In 1996, the **World Food Summit** stated that food security was achieved “when all people, at all times, have physical and economic access to sufficient, safe and nutritious food.”
- In 2001, **Supreme Court** evolved a right to food and read it into the right to life provisions of the Constitution. Following that, a host of court orders and directions ultimately resulted in the **2013 National Food Security Act (NFSA)**, which has been lauded for guaranteeing a **quantitative “right to food” to all Indians**.
- However, the NFSA suffers from serious lacunae in its drafting, which severely undermine its stated objective of giving legal form to the right to food in India.
- As the court has pointed out, **Article 256**, which casts a **responsibility on the States and the Union** to ensure compliance with laws made by Parliament, also provides the remedy, as it can be invoked by the Centre to set things right. Unfortunately, the NFSA, which is **vital for social security** through the Public Distribution System and child welfare schemes, has suffered due to a lack of political will.

Assessing the Food Security Act:

- The NFSA surprisingly does not guarantee a **universal right to food**. It then goes on to further restrict the right to **75% rural and 50% urban** of the Indian population. It also specifies that a claim under the Act would not be available in times of “war, flood, drought, fire, cyclone or earthquake”.
- Given that a right to food becomes most valuable in exactly these circumstances, it is questionable whether the Act is effective in guaranteeing the right that it is meant to.

Present Concern in NFSA:

- Another **problematic aspect of the NFSA** is its embrace of certain objectives that are to be **“progressively realised”**. These **provisions include** agrarian reforms, public health and sanitation, and decentralised procurement, but they make no mention of the need to reconsider fundamental assumptions about our agricultural systems and look at food security in a **more comprehensive manner**.
- It is arguable that the **rubric of “progressive realisation”** actually retards food security reform in the country. This is because some of the elements mentioned under this head are already incorporated in laws and policies at the State and national levels.
- Demarcating them as obligations to be realised “progressively” will lead to **counter-intuitive results** where the States will simply refrain from doing any more than what the NFSA explicitly requires them to do.

Linking food security and nutrition security:

- The two concepts are **interlinked**, but nutrition security has a much wider connotation than food security. It encompasses a **biological approach**, that is, adequate and safe intake of protein, energy, vitamin and minerals along with proper health and social environment.
- The **nutritional aspect** of the quantity of grain to be distributed to each person under the Public Distribution System (PDS) is somewhat less researched, though the Act has aimed at attaining this goal.
- Poor quality of food **lacking essential micronutrients** and **no diet diversity**, and unhygienic conditions of storage may come in the way. There are **other promising features** under the Act, such as:
- Free daily meals for children and maternity benefits, including cash for pregnant women, which can **combat rampant undernutrition** (calorie deficiency) and malnutrition (protein deficiency) across the country.
- These steps may perhaps **complement** the existing nutritional programmes such as mid-day meals and Integrated Child Development Services.

Way Forward:

- Finally, while the NFSA addresses **issues of access, availability** and, even tangentially, utilisation, it is largely **silent on the issue of stability of food supplies** — a startling omission given India’s vulnerability to climate change impacts, to name one impending threat to food security.
- Thus there is a need to **frame a “third generation” food security law** and **recognise and mainstream issues** including increasing natural disasters and climate adaptation.
- **Modernisation of the PDS**, with the use of information technology, could incorporate such dynamic features to the supply of subsidised food to those who need it, and eliminate deficiencies and fraud.
- The States must gear up to work on **adequate logistics** for digitisation of ration cards, computerisation of offtake and delivery of foodgrains, and effective monitoring of fair price shops, possibly through involvement of communities or other feasible ways. This will bring in **greater transparency in the system** and would go a long way towards raising the nutritional status of Indians.
- Such a framework would **robustly address** the challenges facing the country’s food security **across all four dimensions- access, availability, utilisation and stability** and make a **coordinated effort to resolve** them instead of the piecemeal efforts that have characterised such attempts so far.
- Food security brings together **diverse issues** such as inequality, food diversity, indigenous rights and environmental justice.
- Given the current crises in India, it is time we prepare a **third generation right to food legislation** that recognises that a **climate-as-usual scenario** no longer exists. Such a legislation would ideally be rooted in the principle of a **right to food security in its true spirit**.

8. TO BE AN ENVIRONMENTAL WORLD POWER

Context:

- The **UN Environment Programme (UNEP)** has chosen India to be the ‘host country’ to mark **World Environment Day**. But the question is when will New Delhi rise to connect the dots between representative democracy and ecological sanity.
- The theme of the **2018 World Environment Day is “BEAT PLASTIC POLLUTION,”** which aimed to raise awareness on the environmental and health challenges posed by haphazard disposal of non-biodegradable waste.

Ecological Degradation leads to Destruction:

- **Ecological ruin** is on a gallop across South Asia, with life and livelihood of nearly a quarter of the world's population affected. Yet, our polities are able to neither fathom nor address the degradation. The distress is paramount in the **northern half of the subcontinent**, roping in the swathe from the **Brahmaputra basin to the Indus-Ganga plain**.
- Within each country, with politics dancing to the tune of populist consumerism, **nature is without a guardian**. The erosion of civility in geopolitics keeps South Asian societies apart when **people should be joining hands** across borders to save our common ground.
- Because wildlife, disease vectors, aerosols and river flows do not respect national boundaries, the environmental trends must perforce be discussed at the **regional inter-country level**. As the largest nation-state of our region, and the biggest polluter whose population is the most vulnerable, **India needs to be alert to the dangerous drift**.
- Pollution can originate in one country but can cause **damage in another country's environment**, by crossing borders through pathways like water or air. Pollution can be transported across hundreds and even thousands of kilometers.

**Present situation in India:**

- Despite being a **vast democracy** where people power should be in the driving seat, the Indian state not only neglects its own realm, it does not take the lead on **cross-border environmentalism**.
- Thus, Bihar is helping destroy the **Chure/Siwalik range of Nepal** to feed the construction industry's demand for boulders and conglomerate, even though this hurts Bihar itself through greater floods, desertification and aquifer depletion.
- Air pollution is strangling the denizens of Lahore, New Delhi, Kathmandu and Dhaka alike, but there is no collaboration. Wildlife corridors across States, provinces and countries are becoming **constricted by day by day**.
- **Worsening air quality** in the last two decades has emerged as one of the major reasons for high numbers of **premature deaths**, says a new study conducted in 11 north Indian cities.
- Climate change is introducing massive disturbances to South Asia – most notable is **rise of sea levels**. The entire **Indian Ocean coastline** will be affected, but the hardest hit will be the **densely populated deltas** where the Indus, the Irrawaddy and the Ganga-Brahmaputra meet the sea.
- Yet, there is **no proper mechanism and framework** to deal and address the tens of millions of 'climate refugees', who will move inland in search for survival.

China's Tackling on Pollution:

- China has been resolutely tackling **air pollution** and **promoting clean energy**. But while Beijing's centralised governance mandates environmentalism-by-decree, the subcontinental realities demand civic participation for sustainability to work.
- It is very promising to see that China is putting pollution high in its **domestic policy agenda**, and people look forward to seeing how the country moves forward on this.
- China want to take on a leadership role by **implementing policies domestically** that address plastic pollution upstream.

Start measuring 'green GDP' of States :

- **India's environmental diversity and riches** are universally recognised but have never been quantified. Starting this year, the government will begin a five-year exercise to compute **district-level data of the country's environmental wealth**.
- The numbers will eventually be used to calculate **every State's 'green' Gross Domestic Product (GDP)**. The metric will help with a range of policy decisions, such as compensation to be paid during land acquisition, calculation of funds required for climate mitigation, and so on.

- A pilot project is set to begin this September in **54 districts**. **Land will be demarcated into “grids”** with about 15-20 grids per district. These will capture the diversity in the State’s geography, farmland, wildlife, and emissions pattern, and will be used to compute a value.
- The government has also launched a **‘green skilling’ programme** under which youth, particularly school dropouts, would be trained in a range of ‘green jobs’ — as operators of scientific instruments used to **measure environmental quality**, as field staff in nature parks, and as tourist guides. Some of the labour required for the survey would also be sourced from the **green-skilled workforce**.

A new kind of Chipko:

- Today, environmental activists all over tend to be lampooned in the media and social media as anti-national, anti-development saboteurs.
- The **task of preserving the forests and landscapes** has mostly been relegated to the indigenous communities. You will have the **Adivasi communities of the Deccan** organising to save ancestral forests, and **the indigenous Lepcha** fighting against the odds to protect the upper reaches of the Teesta. The urban middle class is not visible in environmentalism, other than in ‘beautification projects’.
- Perhaps we have been foolhardy in waiting for **another Chipko to emerge**, and the changed times may require new approaches. Tomorrow’s activists must work to quantify the **economic losses of environmental destruction and get local institutions to act on their ownership of natural resources**.

Conclusion:

- The activists must harness **information technology** so as to engage with the public and to override political frontiers, and they must **creatively use the power of the market itself** to counter non-sustainable interventions.
- For Instance, under focus was the **severe air pollution in Delhi** caused by the burning of paddy straw in neighbouring Haryana and Punjab. **An ‘INDUS impact’ projects** aims to halt the hazardous burning of paddy stubble by promoting business partnerships that “upcycle” it.
- This entails using paddy straw as feedstock to make materials that would find use in construction and packaging — a **technology and expertise** that foreign companies are keen to market in India.
- The States and the Union government need to take note of this alarming situation and create a **national clean air action plan** which is ambitious, effective and focuses on time-bound implementation
- **Work towards ecological sustainability** must go beyond ritual, with the path seeming to lie in the **empowerment of local government** all over. Elected representatives in cities and districts must be challenged to emerge as the bulwark of environmentalism even as the provincial and national governments are asked to rise to their regulatory responsibilities.
- When **‘organic environmentalism’** rises **from the grassroots** and makes state authority accountable, South Asia and its peoples will be protected. At that point, no force will be able to stop activism across the frontiers and South Asia will begin to tackle pollution.

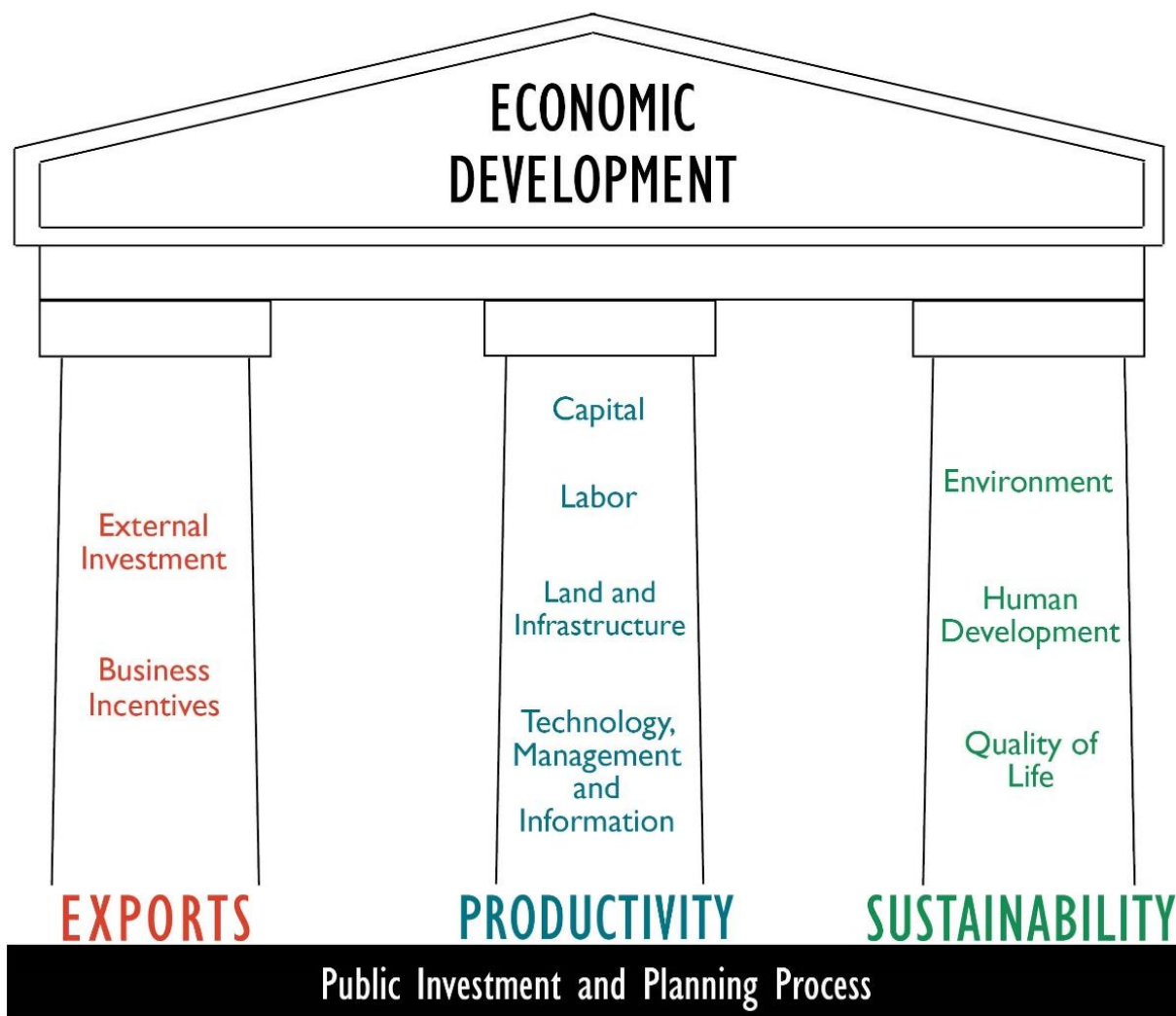
9. AN UNEXCEPTIONAL ECONOMIC PERFORMANCE

Context:

- Recently, the **Central Statistics Office (CSO)** released much-awaited estimates of **National income** for the final quarter of the 2017-18 financial year.
- The government embraced the **GDP figures** to declare that it has successfully **“accelerated growth”**. However, while this holds true for the past few quarters it does not when the past four years are taken into the reckoning.

Annual Growth since 2014:

- The facts are that the annual rate of growth since 2014 has first risen and then declined. By 2017-18 growth at 6.6% was less than the 6.9%(in 2014).
- **Demonetisation** has definitely accentuated the **unemployment problem**, especially in construction and real estate sector as they are cash rich sector. But one thing these numbers have cleared the misconception of lot of authorities who without having data had unnecessarily castigated the GDP makers for having fudged data.



Measurement of Growth and Economic performance:

- The **Indian Statistical System** is robust and gives a clearer real picture.
- There are of course other aspects of an economy that should legitimately be of our concern but this government has generally prioritised production as reflected in its attention to the **'ease of doing business'** and its flagship programme **'Make in India'**.
- It is indeed right that there should be **focus on production**, as incomes are low in India and the **expansion of employment** is a function of the growth of output.
- The accelerating growth in the most recent quarters may be placed in perspective as follows: the economy is accelerating along a **lower growth path**. Further, and it needs **recognition**, that the present government had inherited a **strongly accelerating economy**.
- **Fiscal consolidation**, as this drive is tendentiously referred to, lowers aggregate demand. Its votaries claim that **'crowding out'** will work in reverse to **boost private investment**, thus restoring the original position. This has not happened yet, and a decade is a long enough time to have allowed it to play out if it is inevitable.
- There is a way of dealing with the **demand-contracting effects of fiscal consolidation**. That is, to bring about expenditure switching in the government budget, whereby expenditures with **high multiplier effects** are privileged over those with a lower potential on this score.

Budgetary strategy

- **Two points** may be made about the Modi government's **budgetary strategy**.
 - ✓ First, over the five budgets it has presented, it has maintained the **share of capital expenditure** but this has occurred alongside a **declining total expenditure**, perhaps motivated by the pursuit of 'less government'. The net effect of these is a slightly lower budgetary capital outlay as a share of GDP.
 - ✓ Second, the rate of growth of **'government final consumption expenditure'** has been steadily increased. The growth implications of such a strategy are obvious.
- Though **producer price inflation** has continued its downward trend since 2014, the policy rate of the Reserve Bank of India has not kept pace, raising the real cost of borrowing.

- While there has been **self-congratulation** on the part of government that it engineered a shift to inflation targeting as the alpha and the omega of monetary policy in India, there is **insufficient acknowledgement** that when faced with **food price inflation** the mechanism works by sacrificing output.
- The irony is that while India finally has '**inflation targeting**' it does not yet have an effective anti-inflationary policy, which would be to ensure food supply at steady price. So, **unimaginative conduct** of macroeconomic policy has resulted in **slowing demand growth**.
- The **second factor** contributing to slack demand in the economy has been **agricultural performance**. In the first two years of the government, the weather cycle wreaked havoc by reducing agricultural output in 2014-15 and barely increasing it in 2015-16. The growth of agricultural incomes could not but have been affected by this. In 2016-17, however, agricultural output rebounded, **posting very strong growth**.
- But now **demonetisation**, by disrupting the supply chain, is likely to have not just stymied the growth of agricultural incomes but actually lowered them. The **growth of manufacturing** reflects this. The CSO's estimates show that it declined considerably in 2016-17, and by 2017-18 was barely half of what it was in the year before the demonetisation.
- '**Make in India**', which had targeted manufacturing, has not had much success despite any progress made on **the ease of doing business**.

Despite the advantages, drawbacks are:

- What about the role of the **external environment in domestic growth**? For three years running from 2014-15 the price of oil fell continuously. The windfall could have been used to step up **India's creaking public infrastructure** to address hardship and **boost demand**. But it appears to have been used up expanding government **consumption expenditure**.
- Another favourable development, which unlike the oil price decline continues, is that the world economy is growing steadily for the first time since the global economic crisis set off in 2007-08. Surprisingly, however, **India's export performance** since 2014 is far less impressive than it was in the five years following the crisis.
- The **balance of payments** is being shored up by **capital inflow**, much of it short-term. **India's high foreign reserves**, advertised by the Prime Minister at Davos, reflect this aspect rather than dollars earned. This is costly for growth. It keeps **interest rates high and demand shackled**.

Making the Growth Trajectory back on Track:

- Creating a **climate for investment** is important because the demand has gone down in several sectors of economy and the industry is not pouring new money into manufacturing and operations.
- So government has to do things on several fronts. Government should **concentrate on infrastructure projects** which will be generating good deal of demand in future. The real estate has the **maximum forward and backward linkages** and here is where government should focus the most.
- Construction, employment orientation, employment intensive, addressing issue of land availability, affordable housing- making it feasible should help the economy.
- The **Government expenditure** can be **increased in three sectors**
 - **Railways** no longer have fund constraint that was present earlier- lines of credit LIC, people willing to invest, government support has increased. However, **railway's capacity to spend money** needs to be developed.
 - **PPP in highways** is going to take a long time. Now EPC has come in where government spends money and contractors are private sector. Also, an **annual hybrid annuity model** has been tried where private sector also plays some role.
 - **Electricity** sector investments have come down by saying that there is electricity surplus in some states. But there is a surplus because there is no demand! India needs to continue to add 5-6% to its capacity in generation and **increase electricity infrastructure** to provide electricity in all the parts of the country.
- Thus, **India's macroeconomic front** is reasonably sound. It is possible to take risk to economic boost. Growth has to come from private sector. If the government tries to expand and tries to spend out of its way, it will hit the macroeconomic situation. **Fiscal deficit ceiling** cannot be breached.
- The **private sector in India** depends on government to give signal which is problematic. GST, IBBI enactment, fiscal ceiling are the solid measures to put the **growth trajectory on sound footing**.

Conclusion:**Measure needed to improve Economic performance of the country:**

- ✓ Increase the demand scenario, with the **revival of rural demand**.
 - ✓ More focus on **MSMEs development**.
 - ✓ **Capacity utilization problem** will also be solved if there is increase in demand.
 - ✓ Despite **rise in crude oil prices** or increasing US federal interest rates, India has remained stable.
 - ✓ Focus on **infrastructure development** with public spending, particular agriculture sector to solve the supply side problems because inflation is again increasing.
 - ✓ Focus on **Export basket scenario**. Global market is reviving but not able to compete due to domestic issues. Focus on exporters to increase competitiveness in international market
 - ✓ Focus on **stalled projects** which can revive the demand for raw materials and basic industries.
- There shouldn't be a single goal oriented fiscal policy and single goal oriented monetary policy.
 - The **interest rate, exchange rate and fiscal deficit** have to work together keeping in mind internal balance and external balance. It is very important to know whether the deficit is to create **Asset or run revenue expenditure**.
 - The FRBM is **expenditure switching mechanism** from revenue deficit to **capital expenditure**. FRBM has **three targets**
 - Fiscal deficit
 - Revenue deficit
 - Public debt target
 - It is more crucial to **achieve Revenue debt target** rather than fiscal deficit. If the government is forced to achieve 3.25 % fiscal deficit, there will be impact on outstanding liability.
 - The 3.2% fiscal deficit was assumed when there were no shocks in the economy. Now there is effect of demonetization, GST which has contributed to ring down the fiscal deficit. Hence, the government should avoid sticking to FRBM target very strictly at the same time **focus on Capital Expenditure**.

10. OPEN DATA, OPEN GOVERNMENT

Introduction:

- The application of data and their assimilation with solving social problems, enabling better governance and powering elected governments to serve their citizens better is ushering in a new revolution.
- When Artificial Intelligence is coupled with open data, a real paradigm shift begins. With choice and information-sharing now redefining consumer behaviour, every company is looking to embrace or at least look like it is embracing the new paradigm of data-driven innovation. The “audacity of hope” for a country of a billion aspirations is yet to bear result.

What is Open government data?

- **Open government data** means **publishing information** collected by the government in its entirety, such as government budgets, spending records, health-care measures, climate records, and farming and agricultural produce statistics. If the advent of data-driven business models was a watershed moment, **this is the real pot of gold**.
- **Research by PwC in Australia** estimated that **open data** can add an additional **1.5% to the country's GDP**. In the Indian context, this could conservatively translate to **about \$22 billion**.
- A case in point here is **Transport for London**, a public utility, which has digitised and shared only about 80 data sets, yet this has led to the creation of **multiple technology applications** for city transport and maps, unlocking estimated economic benefits and savings for the city to the tune of £130 million.

Privacy and consent in using open government data:

- While concerns around privacy and consent have been well articulated, **open government data is a silent but powerful movement unfolding globally**. Over 100 governments have already signed a charter to proactively share data collected by various government departments, for public consumption.

- **Fostering collaboration, enabling creative innovations and collective problem-solving are giving accountability and transparency a shot in the arm.**
- **“Datafication” of businesses** has also brought to the fore the criticality of developing data management, storage and privacy laws.
- For Instance, The European Union with its **General Data Protection Regulation** has been a front-runner and other countries, including India, have also adopted a **collaborative model to develop privacy laws**, which includes deliberations with creators of data (the consumer) and users (corporates).

Open government data: A National Asset:

- Unfortunately, the potential of this national asset is being **grossly underutilised**. We need to act on it without further delay for **three basic reasons**.
 - One, such data collected by governments are for **citizen welfare**; hence they have an implicit **right to benefit from the information**.
 - Two, **data sets** such as government budget usage, welfare schemes and subsidies **increase transparency** and thereby **build trust**.
 - Third, and most important, it paves the way to develop **technology-led innovations** which can **unlock massive economic value**, thereby benefitting even the poorest of poor, the under-represented and the marginalised.
- For instance, *availability of data* on yearly produce of crops, soil data health cards and meteorological data sets can help companies develop **customised crop insurance solutions** with specific risk-based pricing.
- **Data points around progress** in literacy rates, demographic data and density of educators can help develop customised solutions for villages. Similarly, information on availability of facilities in public hospitals, current occupancy rates, hospital and demographic data can pave the way for curated health-care applications. The cases are endless and **technology** can have a **multiplier effect**.

Government Efforts and current position:

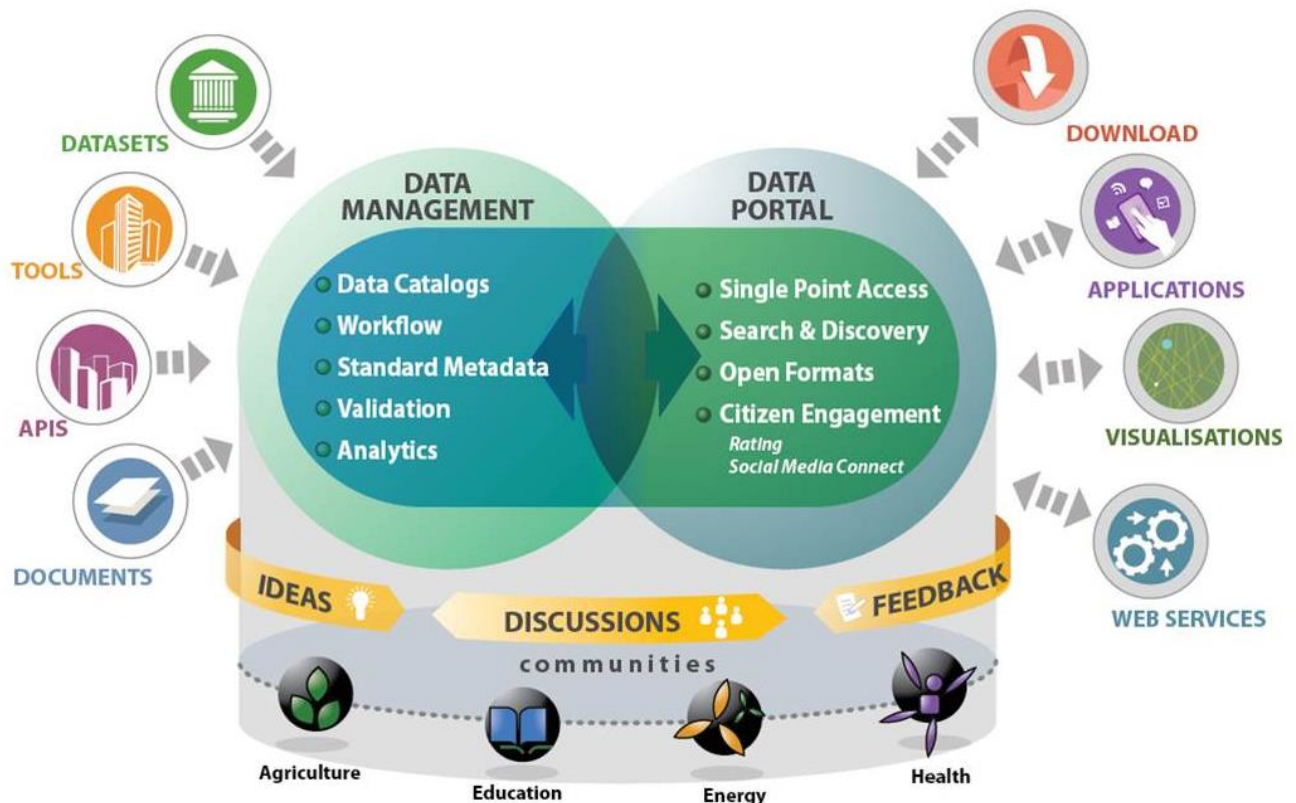
- The **power of open data** has hardly been lost on the Indian government. The Ministry of Electronics and Information Technology has made some laudable efforts, including a **policy around open data**.
- The **Open Government Data (OGD) Platform** India has been set up by the National Informatics Centre (NIC) in compliance with National Data Sharing and Accessibility Policy (NDSAP) 2012. The **objective of the policy** is to provide proactive access to government owned sharable data along with its usage information.
- India currently houses **more than 1.6 lakh data resources** and has published over 4,015 application programme interfaces (APIs) from across 100-plus departments. As a result, **India’s global ranking** by the **Global Open Data Barometer** has jumped.
- This is a good start but **not enough**. A closer analysis of the Open Data project shows good intent but sporadic execution. Hence, while India publishes data points, **very little of it is getting utilised** by data consumers, scientists and corporates. Naturally, the socio-economic impact is limited.

Conclusion:

Therefore, Five-point framework to fill the gaps of Open Data Project:

- Proposed a **5C framework** can able to address the current underlying execution gaps of the **Open Data project**, and believe it can help **India achieve its stated objectives**:
- To double farmers’ incomes by 2022 and provide universal health coverage and micro loans to micro, small and medium enterprises, promoting Digital India, start-up India, Make in India, even women empowerment among others.
- The first step is to **ensure completeness of data stacks** opened for use either through machine-readable formats or direct APIs. **Completeness** would imply a data set.
 - For example, **soil data cards** will have data on all relevant aspects as well as current emerging technologies such as **Blockchain** and the **Internet of Things** to provide the opportunity to automate data collection.
- **Comprehensiveness of a data stack** is essential.
 - For example, a **comprehensive agri-data set** would have digitised data sets on soil data, rainfall, crop production as well as market rates. Currently, data sets shared in India are somewhat disjointed and not comprehensive.
- **Clustering of relevant data sets** and APIs would be the next step. This would mean combining data sets which can lead to the creation of applications such as farm insurance from weather, soil and crop cycle/sale data. Therefore, technology developers have a road map of **“innovations in focus”** for national development.

- The **fourth step** is **building anchor cases or use-cases to encourage data usage**. A case in point is Aadhaar/identity data which has seen exponential growth (post identification in e-KYC). Taking the Aadhaar case further, its API has led to the development of market applications, an Aadhaar-enabled payment system, and direct benefit transfers among others which are clearly pushing the **“financial inclusion” drive**.
- The **final step** would be **setting up a comprehensive governance framework** which includes an open data council with cross-sector representation to monitor, regulate and build usage after proportionate oversight.



- ❖ The time is now ripe for the government to create a data-driven governance architecture by building digital trust in the economy and its intent.
- ❖ The government is committed to make best use of big data in establishing rule of precision governance. While doing so every care would be taken to ensure that strict privacy rights of individuals are protected. However, unauthorised use of data would be dealt with iron-hand to ensure that nothing comes in the way of making data-analytics a national movement.
- ❖ The big data analytics should focus on poor & under privileged and facilitate inclusive growth. While aiming at taking lead in data analytics it must be ensured that technology is inclusive, affordable, transformative & developmental. OpenGovDataHack being taken up in states would catalyse further start up movement.

11. GOVERNMENT OPENS DOORS TO LATERAL ENTRY

Context:

- Recent a notification, the **Department of Personnel and Training**, Government of India, said the **lateral entry scheme** for **appointing joint secretaries** has been started to “invite talented and motivated Indian nationals willing to contribute towards **nation building** to join the Government.”
- The **proposal of lateral entry** is aimed at bringing in fresh ideas and **new approaches to governance** and also to **augment manpower**.
- In a bid to rope in the **expertise of private sector professionals**, Union government has notified **10 positions of joint secretaries** through ‘lateral entry’ scheme.
- Generally, senior bureaucrats are appointed as joint secretaries in several government departments. Any private sector professional with **15 years of work experience in any of the 10 fields** like civil aviation, commerce, economic affairs can apply for the posts. The age of the candidate should **not be less than 40 years**.

Why needed of Lateral Entry:

- Bureaucracy has faced **lot of flak for its inefficiency**. There is a need to change the **behavioural and attitudinal part** of bureaucracy.

Rationale behind the promotion of Lateral Entry:

- When **talked of expertise**, sectors such as water, energy, environment are broad spectrum areas. So one person cannot be an expert on the entire sector. Hence, **domain expertise** can be taken advantage of by bringing in environmentalists into government to frame appropriate policies and take necessary actions.
- The **absolute peculiarity** is lifetime tenure in services. It is not good for discipline, doesn't motivate people and everybody rises with seniority. Too many secretarial positions destroy the hierarchy and hence there is now **no accountability and no reporting**.
- **Lateral entry** should be limited to posts where domain experts are not available in the services itself. Hence, there **shouldn't be one size fits all** approach but case by case basis. The idea is to draw in people who have domain expertise. Even now on contract basis, outsider specialists are being engaged for advice.

Procedure and practices in other countries:

In UK

- There are **short term lateral entrants** allowed to come and work for government and leave.
- There is a **culture of trust** but beyond it there is a **regulatory mechanism** and apparatus put in place to ensure there is no misuse of role assumed when in government.
- So, with **adequate safeguards**, lateral entry can be made possible in India.

In US

- It has **revolving door system**. Here, the lawmakers and the lobbyists switch jobs from time to time.
- In this system, more the top position, more is the influence in the government and its policies.
- The **lucrative positions** after government stints are arms dealer, media lobbying, pesticides and chemicals etc.

Challenges can be faced by the practice of Lateral Entry:

- India has a **high corrupt system**, particularly in states. So to allow private people for short term of 2-3 years where they can **leave without responsibility**, there cannot be any disciplinary control over them or the actions taken.
- The **fairness of the selection process**— the process of recruitment should not be corrupt. But the way systems work in India, unfortunately, the initial wave of enthusiasm degenerates into nepotism.
- **Chief Secretary's post** has become highly political post. If chief secretary starts selecting experts, there can be huge disasters as seen in telecom sector.
- It will be **difficult for the country** to bring in private players for two-three years and then **entangling in legal matters** over the decisions taken by them.

Concerns for Lateral entry to be notice:

- **Experience:** The level of experience gained by regular bureaucrats during initial years dealing with common man problem will be absent in lateral entrants.
- **Result oriented:** Always the results need not be tangible especially in government service. Lateral entrants see the tangible part.
- **Short-term results:** Regular bureaucrats see long term results compared to lateral entrants.
- **Profit loss:** Lateral entrants will be everything in profit loss terms due to their previous experiences.
- **Demotivation:** For regular entrants and there might also be high attrition in bureaucracy.
- **Political favouritism:** They might be inducted due to their political ideology, political connections.
- **Corruption and Nepotism:** There are chances of them indulging in short term benefits and political executives might indulge in nepotism.

Need of the hour: Reforming the civil services:

- For bureaucracy to change its system, there is a **need to first bring in political reforms**. Unless the politicians allow the civil servants to do their job properly, they cannot be faulted for not doing their jobs.
- There is an incentive to not make any mistake but no incentive to do anything right. So there is a **need to change the incentive structure for promotion**. Having lateral selection after certain level of seniority within the government will allow **sufficient competition** in play and get good people.

- Those who fail to make the cut, **shall retire**. It is not necessary that everyone who joins the services should retire at secretarial levels. Currently, some people are being compulsorily retired after 50 years when the **rigorous review is taken place**.
- Even at state level such steps should be taken. There should be **written examinations** and **interviews** at middle level career to weed out incompetent people.
- For Instance, **Lot of administration** is mainly looked at Delhi. But three fourth of the administration is based outside Delhi.
- There is no force to settle the political situation in some states like UP. Thus, the **focus to bring in reforms should be in a right direction**. For this, ground level changes have to be made. For example, **District administration** is the bedrock of civil service. Instead of big districts, there should be **smaller ones** which are handed over to junior people. This gives time to **senior administration** to focus on bigger issues.
- **More and more departments and portfolios** should be combined into one. Less of secretaries and more of experts is the requirement.
- A **systemic cleansing approach** needs to be taken to ensure that there is improvement in bureaucracy. There **need to be tenure in secretarial positions** as there is a need for continuity.
- In **SR Das report**, the average tenure of the district collector is 7 months and is still a reality today. Instead there should be a **commissioner** in district where he is reported to.

Conclusion:

- UPSC has had an **excellent record over years**. The careers of the service officers is selected from the best in India. He/she has seen **cross sectoral experience** of 10-15 sectors. Thus they have certain advantage. The man at the top has a **broad vision** rather than having **domain expertise**. Hence, the **top positions in critical areas** should be reserved for within the government.
- For the sectors that require **more of technical and domain knowledge**, lateral entry can be considered a good option. In principle it is a good idea. But the private sector should be involved only when there is a **required gap to be filled**. Along with recruitment, they should be also made **accountable for the actions and decisions** taken in capacity of a government officer.
- **Accountability** will ensure no personal gains once the position is left. Hence, Broadly, **lateral entry** should be favoured only if it is to stay for long term.
- Such steps will help in **smooth assimilation of people** from walks of life being included in the bureaucratic framework, with their **professional integrity** assured and no unnecessary political pressure to favour a particular community or cause. This step can also help in **filling the shortage of bureaucrats** at top posts and help in **reducing the red tape mechanism** of the country's administrative system.
- Lastly, **political reforms** are the key to system change in governance in country. They should be slowly induced with time to make bureaucracy more efficient.

12. THE GOVERNMENT NEEDS TO HANDLE PUBLIC SECTOR BANKS WITH CARE

Context:

- Recent speech of Former Reserve Bank of India (RBI) governor Y.V. Reddy, said that confidence in the **working of public sector banks** is at a historic low. The reason for this is not very difficult to discern. PSU banks are **grappling with a high level of bad loans**, and a number of them have been put under **RBI's prompt corrective action** and are not in a position to lend.

Non-performing assets (NPAs)-Biggest threat for Indian Banking System:

- In the March quarter, PSU **banks booked losses** in excess of **Rs 62,000 crore** and the total gross non-performing assets (NPAs) stood at **about Rs 9 trillion**.
- The **non-performing assets (NPAs)** in the Indian banking system have become a big concern – posing a threat to the stability of the country's financial system and the economy. **India has been ranked fifth** on the list of countries with the highest Non-Performing Assets (NPAs), **by CARE Ratings**.
- Of the **21PSBs, 11 are under the Prompt Corrective Action (PCA) plan** of RBI. After the Nirav Modi scam, news reports suggest that an additional five banks are at risk of being included on the list.
- The PCA plan imposes a **range of restrictions on bank operations**, including issuance of dividends, branch expansion, new hires, and management compensations and fresh lending. In short, PCA reduces the damage

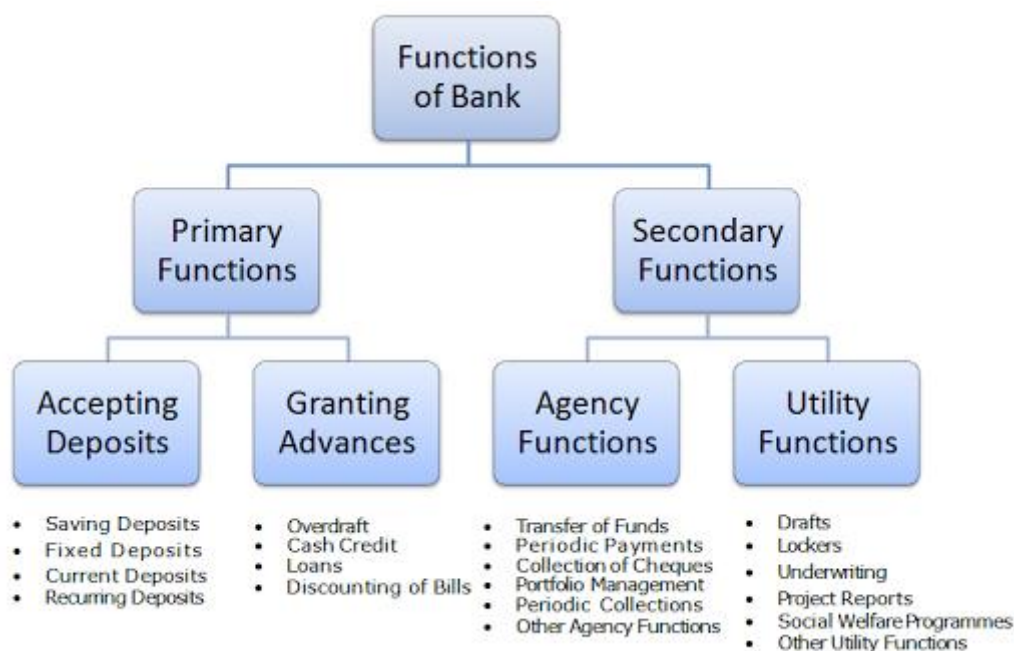
that these banks can do to the system, but it also **limits the opportunities** these banks have to revive with good lending.

Poor pay, more scrutiny in PSBs:

- Another challenge in finding replacements is **the low salaries on offer at state banks**, when compared with their private sector peers.
- For Instance, Anantha subramanian earned about Rs30 lakh at PNB in the year ended March 2017, about 5% of the Rs6 crore earned by Chanda Kochhar, the CEO of the country's second-largest private lender ICICI Bank Ltd.
- While this massive discrepancy was always the case, and also **intensified scrutiny** of state bankers has eroded the appeal of the jobs.
- Current and former top executives at least four banks are being investigated by federal authorities for allegations of impropriety.
- Moreover, the government has said state banks will have to show that they're cleaning up their act if they want to **win fresh capital injections**. These reforms include selling non-core assets and setting up separate units to manage stressed assets, steps that would need top executives to sign off on them.
- **About 30 top level vacancies** exist at state banks, including executive directors, the *Press Trust of India* reported. While the government used to **directly appoint CEOs of state banks**, triggering accusations of cronyism.

Government steps of Recapitalization plan for PSBs:

- Although the government is in the process of **recapitalising state-run banks**, it is likely that the current **Rs 2.11 trillion PSU bank recapitalization plan** will not be sufficient to put the PSU banks back on track. Since PSU banks own about **70% of banking assets**, their inability to lend will have a **direct impact on economic growth**. Therefore, it is important that the situation is **handled with care**. In this context, there are a few important issues that need attention at this stage.



Areas to look in to for corrective action:

- First, as recently **reported by Bloomberg**, four out of 21 PSU banks have not appointed **replacements for chief executive officers (CEOs) and top executives** in nine more banks are expected to leave in the coming months. Given this state of affairs, it is possible that new CEOs may not be appointed in time. It is certainly not a desirable situation, especially at a time when banks are stressed and need swift decision making. It is important to have a plan in place for a **smooth transition at the top**.
- However, it is also likely that the government will find it difficult to attract talent due to the **fear of investigative agencies** among bankers. A number of present and former senior executives are under investigation for past transactions. The government must ensure that **investigations don't become a witch-hunt**, and that the issue is **handled with utmost care**.

- Second, the government is now mulling **the formation of an asset reconstruction company (ARC) for faster resolution of bad loans** and has constituted a committee to make recommendations in this regard. The basic problem will be one of **valuation of stressed assets**. For instance, if they are transferred at par and the resolution is left to a government-owned ARC, it could **end up creating more complications** in the system.
- Also, the ARC will need a **significant amount of capital**, which the government is not in a position to provide. In fact, now that India has the **Insolvency and Bankruptcy Code** in place, there is no need for the government to form an ARC.
- Banks should be able to resolve bad assets under this framework. If the government can actually find resources to reduce stress in the banking system, it would do well to reassess the capital requirement of PSU banks and revisit the capital infusion plan.
- Third, apart from **capital needs** and faster resolution of stress assets, **PSU banks need governance reforms**—something that has been largely missing so far from the picture. It is correct that the present government has refrained from **micromanaging PSU banks**, but this in itself will not solve the problem.

The NPA “SAMADHAN” Project:

- **Resolution process** must move on smoothly – and not be stalled by long drawn legal wrangling’s. Longer the delay, the resolution of assets will be postponed further. The capital that is blocked in the NPA would not yield anything and will **continue remaining stressed**.
- It is important to recognize that even if we could resolve quickly, no matter the amount of “haircut” there exists a major upside for both the economy and the bank:
 - **For Economy:** 1000 of stalled projects will come back contributing to the growth and positive GDP evaluation
 - **For Bank:** As they have been provided for 100% for the stressed assets, at least their financial health would turn better.

Economic Survey Suggestions:

- Post resolving stressed assets, there is no guarantee that it will not come up again. To prevent a recurrence of such failure, it is important to reform not just governance, but **also regulatory oversight**. The failures of banking regulation must be addressed and checks and balances created.
- **Consolidation** could be the first step for stringer balance sheet but the next step should be to reduce government’s stake to below 49% so that the banks can work without any political influence.
- **Need to be mindful of the 4 Rs —**
 - ✓ **‘Recognition’** of assets close to their true value
 - ✓ **‘Recapitalisation’** or infusion of equity for banks to protect their capital
 - ✓ **‘Resolution’** in the form of selling underlying stressed assets
 - ✓ **‘Reform’**, through the right future incentives for the private sector and corporates to ensure there is no repeat of the twin balance sheet syndrome.

Way Forward:

- At a broader level, as YV Reddy noted in his remarks, there should be **clarity on the future of PSU banks**. In fact, some of the banking reforms will only work if a **clear road map is defined**. For instance, if the government believes that a few banks should focus on **underbanked areas**, some **fiscal support** may be warranted.
- The government, perhaps, needs to put in place a **new framework for governance** where, for instance, appointments at higher levels are made in time, and the **board is professional and accountable**. A situation where banks run without a CEO should never arise.
- PSU banks should be in a position to attract talent by offering **competitive compensation** at every level to be able to improve their operation and risk management systems. Only when banks are run by professionals will they be in a position **to fund India’s growth in the long run** and **create value for all stakeholders**, including the taxpayer.
- ✓ Perhaps banks should be allowed to **focus on specific areas of strength** so that they become more efficient over time and are not dependent on budgetary support for growth.
- ✓ Though the government has entered its last year in office, it still has time to **initiate broad reforms** and give a **fresh direction to PSBs**. It will be difficult to sustain higher growth in the medium term without a **strong banking system**.

13. A PLASTIC CHARTER

Introduction:

- **Plastic pollution** has become an **epidemic**. Every year, we throw away enough plastic to circle the Earth four times. Much of that waste doesn't make it into a landfill, but instead ends up in our oceans, where it's **responsible for killing** one million seabirds and 100,000 marine mammals every year. For the good of the planet, **it's time to rethink how we use plastic**.
- **Every piece of plastic** ever disposed of (this includes the toothbrush your great-grandfather used) is **damaging the earth**. It's lying somewhere in the earth, floating in the ocean, or been broken down into microparticles and in the food chain. Although a fraction of the plastic disposed of is recycled, most of it eventually **ends up in the ocean or in dump sites outside city limits**.

Common sources of Plastic pollution:

- Merchant ships expel cargo, sewage, used medical equipment, and other types of waste that contain plastic into the ocean.
- The largest ocean-based source of plastic pollution is discarded fishing gear (including traps and nets).
- **Continental plastic litter** such as Food Wrappers & Containers, Bottles and container caps, Plastic bags, Straws and stirrers etc. enters the ocean largely through storm-water runoff.

Environment Ministry notifies Plastic Waste Management (amendment) rules in 2016:

- The amended Rules lay down that the **phasing out of Multilayered Plastic (MLP)** is now applicable to MLP, which are "non-recyclable, or non-energy recoverable, or with no alternate use."
 - Prescribe a **central registration system** for the registration of the producer/importer/brand owner.
 - Any mechanism for the registration should **be automated** and should take into account ease of doing business for producers, recyclers and manufacturers.
 - The centralised registration system will be evolved by **Central Pollution Control Board (CPCB)** for the registration of the producer/importer/brand owner.
 - A **National registry** has been prescribed for producers with presence in more than two states
 - A **state-level registration** has been prescribed for smaller producers/brand owners operating within one or two states



Rules to be followed to reduce Plastic usage:

- **India's Plastic Waste Management Rules 2016** called for a ban on plastic bags **below 50 micron thickness** and a phasing out, within two years, of the manufacture and sale of non-recyclable, multi-layered plastic (plastic that snacks come in).
- **More than 20 Indian States** have announced a ban on plastic bags. Cities such as Bengaluru announced a complete ban (gazette notification), in 2016, on the manufacture, supply, sale and use of thermocol and plastic items irrespective of thickness.
- **These include** carry bags, banners, buntings, flex, flags, plates, clips, spoons, cling films and plastic sheets used while dining. The exceptions are plastic for export, packaging material for use in forestry, milk packets and hospitals. There are stiff fines that cover manufacturing and disposal.
- We also **need strategies to deal with the plastic** that has already been disposed of. The CPCB report says that As mentioned in the **Solid Waste Management Rules 2016**, waste has to be **segregated separately at source**. This includes separation of dry (plastic, paper, metal, glass) and wet (kitchen and garden) waste at source.
- The **primary responsibility** for collection of used plastic and multi-layered plastic sachets (branded chips, biscuit and snack packets) lies with their producers, importers and brand owners.
- However, none of this has happened at any perceivable scale. Companies say that **plastic waste is too complex** or pretend to be completely unaware of these rules.

From pollution to solutions:

- Admittedly, the complexity of dealing with plastic waste is because of its **ubiquity and distributed market**. Several companies produce the same type of packaging so it is impossible for a given company to collect and recycle only its own packaging.
- Instead, these companies can **collectively implement EPR (extended producer responsibility)** is a strategy designed to promote the integration of environmental costs associated with goods throughout their life cycles into the market price of the products, by **geographically dividing a region** into zones and handle the waste generated in their designated zones.
- This strategy was **used in Switzerland to recycle thermocol** used for insulation of buildings. This also reduces collection, transportation and recycling costs. Companies and governments should interact and research on how to implement such plans.

Private sector Participation in Recycling plastic:

- In India, some companies have helped **empower the informal recycling sector**, giving waste pickers dignity and steady incomes. Another firm has worked with the informal sector and engineered the **production of high quality recycled plastic**. These companies, large corporates and governments could cooperate to **implement innovative means** to realise the value of plastic disposed of while simultaneously investing in phasing it out.
- For example, a **Canadian company monetises plastic waste** in novel ways. It has one of the largest chains of waste plastic collection centres, where waste can be exchanged for anything (from cash to medical insurance to cooking fuel). Through this, multinational corporations have **invested in recycling infrastructure** and in providing a steady and increased rate for waste plastic to incentivise collection in poor countries.
- Such collection centres, like the ones **operated by informal aggregators in India**, can be very low-cost investments (a storage facility with a weighing scale and a smart phone).

Plastic: A wealth from the waste:

- India generates an estimated **16 lakh tonnes of plastic waste annually**. If sold at the global average rate of 50 cents a kg, it can generate a **revenue of ₹5,600 crore a year**.
- Why then is most of this waste around us? In order to realise the potential for recycling, **waste must first be segregated at source**. This segregated waste should be then **transported and treated separately**.
- If plastic waste is mixed with organic and sanitary matter, its recyclability drastically reduces and its value lost.

Conclusion:

- **Local actions are required** for mitigating plastic pollution, using mechanisms such as bans on plastic bags, maximum daily limits for emissions into watersheds, and incentives for fishing gear retrieval.
- **Countries should come together** to establish measurable reduction targets for plastic waste. A **meaningful international agreement**—one with clearly defined waste reduction targets is the need of the hour.

- **Effective policies** must take into account all stages of the lifecycle of plastic—connecting producers to users and ultimately to waste managers.
- **Fossil fuel subsidies incentivise** the plastic market. Hence, Countries should end fossil fuel subsidies. Annually, **4–8% of oil is used to produce raw plastic**.
- India has a major problem dealing with plastics, particularly **single-use shopping bags** that reach dumping sites, rivers and wetlands along with other waste.
- The most efficient way to deal with the pollution is **to control the production and distribution of plastics**.
- **Banning single-use bags** and making consumers pay a significant amount for the more durable ones is a feasible solution.
- Enforcing the Solid Waste Management Rules, 2016, which require **segregation of waste will retrieve materials** and greatly reduce the burden on the environment.
- Waste separation can be achieved in **partnership with the community**, and presents a **major employment opportunity**.
- ✓ The **best way to reduce plastic pollution is *to reduce and phase out its consumption***. Solutions range from carrying your own reusable steel glass, box, spoon and cloth bag while eating out or shopping for groceries to using alternatives to plastic for household items.
- ✓ Additionally, there should be **research on ways to implement** these rules, waste generation quantities and trends and find **innovative alternatives to plastic**.
- ✓ It is time we **rethink, reduce, segregate and recycle** every time we encounter a piece of plastic so that it stops damaging our environment and our lives.

14. KEY TO SUCCESSFULLY MANAGING GROUNDWATER IN INDIA

Context:

- The **World Bank** has approved **Atal Bhujal Yojana (ABHY)**, a Rs.6000 crore Central Sector Scheme of the Ministry of Water Resources, River Development and Ganga Rejuvenation.
- The scheme is to be implemented over a period of **five years from 2018-19 to 2022-23**, with World Bank assistance. The scheme proposal has already been recommended by the **Expenditure Finance Committee** and the Ministry will be seeking Cabinet approval for the project shortly.

Importance of Ground water in India:

- Groundwater in India provides for about 60 percent of the country's irrigation needs, 85 percent of rural drinking water requirements and 50 percent of urban water needs.
- As per 2016 data, around 5 percent of groundwater assessment units in the country are in a critical state and 12 percent in a semi-critical state due to over-exploitation and contamination.
- India's chaos in the water sector is primarily due to the prevalence of status quo with its outdated and dogmatic water institutions and organisations leading to outdated ideas and methods.
- The institutions and organisations from where the ideas originate remain the same since independence. Whether it is management of floods or droughts, the engineers in these organisations cannot think beyond the perspective of engineering solutions.

Situation of groundwater in India:

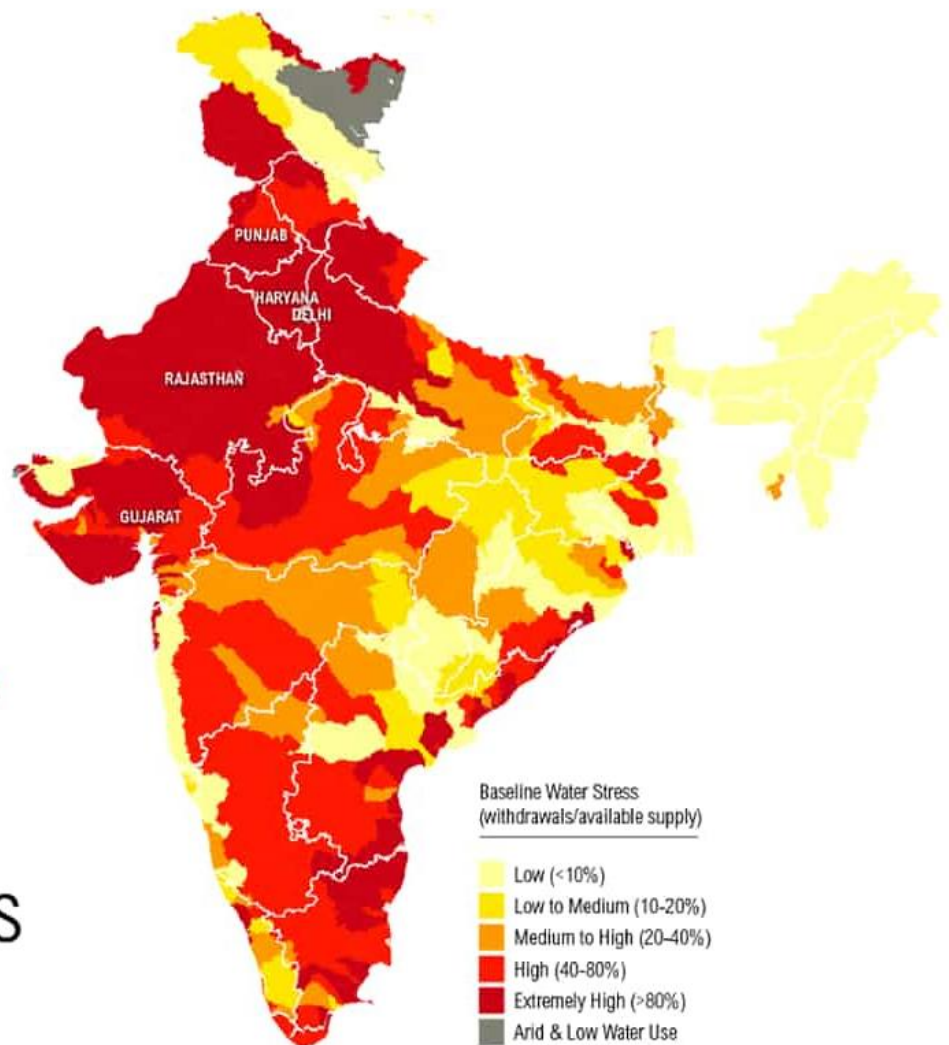
- Today, India is the largest user of the groundwater in the world with **almost 90% being used for drinking water** and almost **60-70% for irrigation**. Current statistics also show that nearly 50% of urban water supply comes from groundwater.
- India is on the threshold of a **very serious groundwater crisis**, which **needs mitigation** both in the fields and at the policy corridors of the country.
- The **groundwater crisis** is embedded at **two different levels**:
 1. Groundwater exploitation of aquifers (where groundwater is stored) in different parts of the India and
 2. Groundwater contamination that find origins, both in geogenic source such as Arsenic and Fluoride along with anthropogenic sources of contamination primarily due to poor disposal of waste and wastewater.
- There is a need to **modernise the regulatory framework** for accessing groundwater soon after massive expansion in mechanical pumping led to the realisation that **recharge could not keep pace with use**.

- Water scarcity, poor water quality and inadequate sanitation **negatively impact food security, livelihood choices and educational opportunities** for poor families across the world. Drought afflicts some of the world's poorest countries, worsening hunger and malnutrition.

Need of Atal Bhujal Yojana:

- Atal Bhujal Yojana has been formulated by the Ministry to **address the criticality of ground water resources** in a major part of the country.
- The scheme aims to **improve ground water management** in priority areas in the country through **community participation**.
- The priority areas identified under the scheme fall in the states of Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh. These States represent **about 25%** of the total number of over-exploited, critical and semi-critical blocks in terms of ground water in India.
- They also cover two major types of groundwater systems found in India – **alluvial and hard rock aquifers**- and have varying degrees of institutional readiness and experience in groundwater management.

54%
of India
Faces
**High to
Extremely
High**
Water Stress



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 WORLD RESOURCES INSTITUTE

- Therefore, Funds under the scheme will be provided to the states for **strengthening the institutions** responsible for **ground water governance**, as well as for **encouraging community involvement** for improving ground water management to foster behavioural changes that **promote conservation and efficient use of water**.
- The scheme will also **facilitate convergence** of ongoing Government schemes in the states by incentivizing their focussed implementation in identified priority areas.

- Implementation of the scheme is expected to **benefit nearly 8350 Gram Panchayats in 78 districts in these states**. Funds under the scheme will be made available to the participating states as Grants.
- **Ensuring active community participation** in groundwater management is among the major objectives of the scheme. The scheme envisages active participation of the communities in various activities such as *formation of Water User Associations, monitoring and disseminating ground water data, water budgeting, preparation and implementation of Gram-Panchayat wise water security plans and IEC activities* related to sustainable ground water management.
- Community participation is also expected to **facilitate bottom-up groundwater planning process** to improve the effectiveness of public financing and align implementation of various government programs on groundwater in the **participating states**.

Conclusion:

- The implementation of the **Atal Bhujal Yojana** is expected to have several **positive outcomes**:
 - Better understanding of the **ground water regime**,
 - Focused and integrated **community based approach** for addressing issues related to ground water depletion,
 - **Sustainable ground water management** through convergence of on-going and new schemes,
 - Adoption of **efficient water use practices** to reduce ground water use for irrigation and
 - Augmentation of ground water resources in targeted areas.
- The implementation of a programme called the **Aquifer Management Programme** by the Government of India is a good initiative to help understand groundwater through aquifers.
- The proposed new regime will benefit the resource, for instance through the **introduction of groundwater security plans**, and will benefit the overwhelming majority of people through local decision-making.
- Overall, the increasing crisis of groundwater and the failure of the existing legal regime make it imperative to entrust people directly dependent on the source of water the **mandate to use it wisely** and to protect it for their own benefit, as well as **for future generations**.

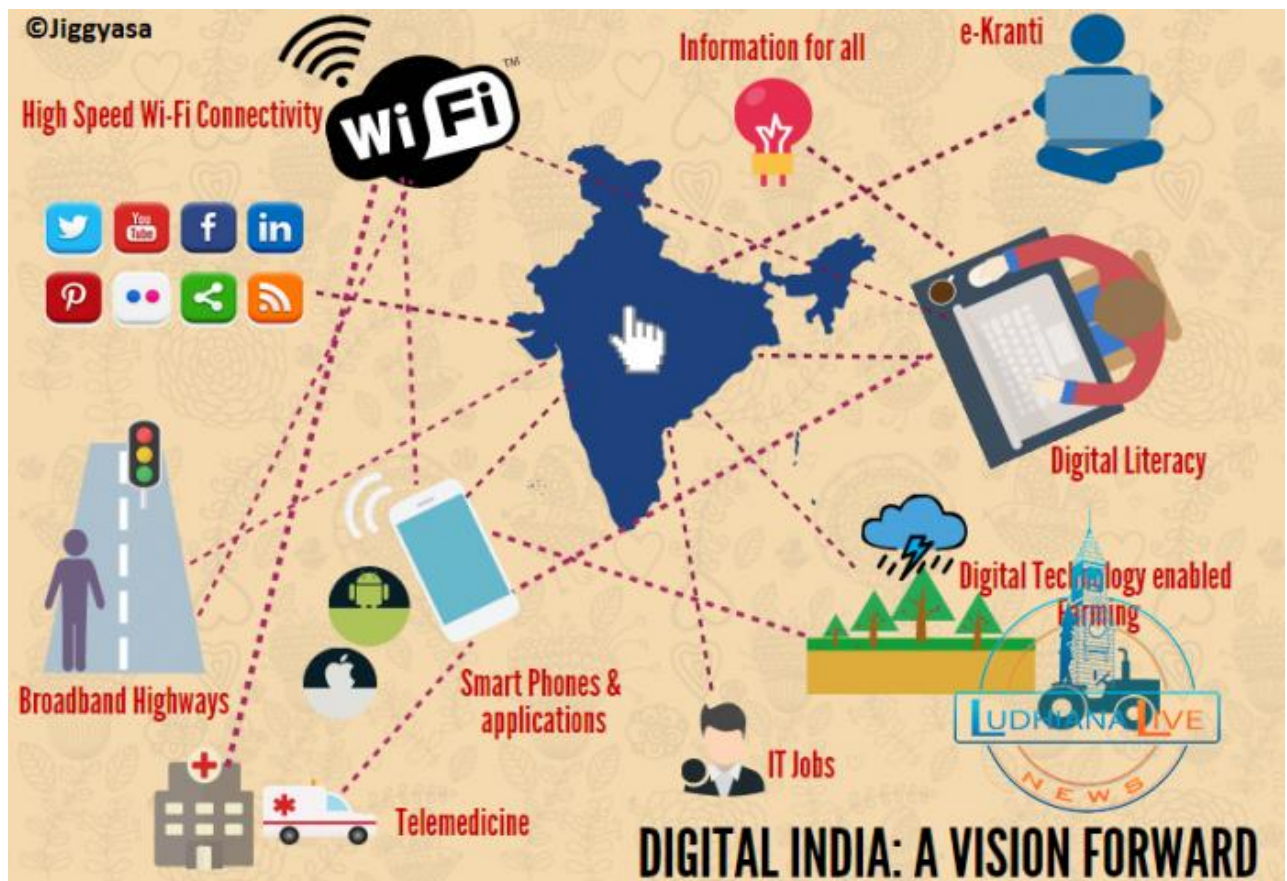
Way Forward:

- ✓ Other successful community-based groundwater management experiences from different states like Andhra Pradesh, Maharashtra, Gujarat and Rajasthan must also be studied. **Collaboration, combination of ideas and community partnerships** hold the key to the success of groundwater management in India.
- ✓ **Water being a State subject**, steps for augmentation, conservation and efficient management of water resources to ensure sustainability and availability are primarily undertaken by **the respective State Governments**.
- ✓ The impact of a worsening water crisis on **the nation's economy, society and the environment is acute**. Unsuspecting citizens face **worsening health crises** due to consumption of contaminated water, thereby destroying their hard earned savings.
- ✓ It is time we **reinvent organisations** and **generate new ideas** so as to save India from water crisis. Clean, accessible water for all is an essential part of the world we want to live in. There is sufficient fresh water on the planet to achieve this.
- ✓ **At the individual level** one needs to be conscious about the his/her water use and **need to understand** where the water comes from. Awareness programs by government and school lessons for children should be taught at very young age so that **every person becomes sensible** when it comes to use of water.

15. HOW DIGITISATION CAN DRIVE GROWTH IN INDIA

Context:

- The central theme of the recent report on 'Economic Outlook for Southeast Asia, China and India', released by OECD development centre, is fostering growth through digitisation.
- The report indicates that ICT (information and communication technology) services embodied in manufacturing and services account for a considerable share of the value of exports from China, India and other Asian nations.



Digital Economy and its necessity as of Today:

- Improved telecom and Internet penetration, availability of skilled manpower for providing IT services, entrepreneurship exhibited in building ICT start-ups, along with government embracing ICT in its operations and services are enabling India to play a **significant role in the digital economy**.
- The **digitisation embodied** in manufacturing and services **improves** efficiency, total factor productivity, spill-over effects, transparency and accountability.
- For example, **e-commerce** has improved **logistics and supply chains**;
 - Digital payment services have provided flexibility and transparency;
 - Digital identification services have enabled de-duplication and prevention of fraud; and
 - Digital learning platforms have augmented literacy.
- Though India pioneered **offshore IT services** to contribute to exports worth \$150 billion, it is this **wave of digitisation** that has brought ICT services to the domestic market at large.
- There have been many studies that analyse the **impact of ICT stock variables** such as mobile and broadband penetration, on economic development. However, there are not many studies that **analyse digital data flows** that characterise digital economy.
- For example, when we use **Ola app to hail a cab**, there are **data flows pertaining to**: fetching map data on vehicle location; direction data that shows the cab driver the pick-up location; navigation data that shows the cab location in real time; and algorithmic data that gives the shortest path between source and the destination.
- Global brokerage company **Morgan Stanley** said that India is expected to be a **\$6 trillion economy – the third largest in the world** – in the next decade.
- In the report, Morgan Stanley said India's digitisation drive would provide a **boost of 50-75 basis points to GDP growth** in the coming decade.

Digital flows rising in recent time:

- In one of the first studies, **McKinsey Global Institute (MGI)** pointed out in its report on '**Global flows in a digital age**', how apart from goods and services, digital flows across countries do contribute to economic development. It points out that cross-border goods, services and financial flows contribute to **about \$30 trillion** and **about 40 per cent of world GDP**, there is increasing trend in **knowledge intensive data flows** compared to capital and labour intensive flows.
- These flows typically have high **research and development (R&D) component** and **intellectual property**, and enable exchange of ideas, thoughts and expressions, facilitated by the digital platforms.

- **Examples include:** courses offered through digital platforms attended by students from around the world; global collaborative design of a 3D printing artefact; tele-medicine by expert doctors; and robotics programming done by **AI programmers** around the world.
- Analysis of a panel data from 2000-2015 across all countries of the world, comprising goods, services, people, and digital flows. They found that a **10 per cent increase in digital flows increases country GDP by 0.2 per cent.**

Policy implications:

- Given this emerging potential of digital flows and economies, **what are the policy implications?**
 - First, the use of digital technologies requires **higher-order cognitive, socio-emotional, and technical skills** that help respond to fast-changing technologies and their adoption at scale. As per 2016 'World Development Report', this **multiplicity of skills** has always been important, but it is now essential. It is time that our technical and management institutes **revamp their curriculum** to integrate all the above features instead of promoting rote learning.
 - Second, **movement of information across borders** is crucial to the operation of the digital economy, and thus to the producers of goods and services that rely on it. Any barriers to free information flow is likely to have adverse impacts. For example, recent initiatives by the government on **"data localisation"** is likely to **inhibit digital flows** in and out of India.

While **security and data protection** are of paramount importance, merely restricting digital flow is not likely to guarantee the same. **Stricter data protection laws** that govern such cross border digital flows is the answer.

- Third, since the digital economy is heavily **based on intellectual property**, we should enforce **strict protection to patents and copyrighted work**, whether produced in India or elsewhere.

For example, the **Indian Patent Act** does not allow **patenting "software per se"**.

- We also need to augment the **infrastructure and capability** at the patent offices in the country so that Indian inventors consider patenting in India seriously, before proceeding to file their patents in the **US Patent and Trademark office**. Since patents are jurisdictional in nature there are merits to **encouraging and incentivising patent filing in India**.
- Fourth, digitisation is pervading **from enterprises to the common man**. The cognitive skills of people, especially in India, is quite varied due to varying literacy levels, Hence there should be **conscious effort** by product/service designers, developers and project managers to ensure that digitisation does not leave behind masses and create a massive digital divide.

At the same time Data protection laws to be act as Firewall for personal and Privacy issues:

Seven key principles

- **Justice B.N. Srikrishna Committee** suggest that the seven key principles should guide the data protection framework in the country.
 1. **Technology agnostic:** The data protection law must take into account the continuous change in technology and standards of compliance.
 2. **Holistic application:** The law must cover both the private sector and the government sector, maybe with different obligations though.
 3. **Informed consent:** The consent should be not just consent but "informed and meaningful".
 4. **Data minimisation:** The data collected or being processed should be minimal — only that data which is necessary for the purpose for which it is being sought.
 5. **Controller accountability:** The committee is clear on **fixing accountability of data controllers**. It says, "The data controller should be held accountable for any processing of data, whether by itself or entities with whom it may have shared the data for processing."
 6. **Structured enforcement:** The committee proposes to set up **"a high-powered statutory authority"**, which "must co-exist with appropriately decentralised enforcement mechanisms." It envisions **three main objectives** of a data protection authority: monitor, investigate and enforce the laws; set the standards; and generate awareness in an increasingly digitised society.
 7. **Deterrent penalties:** It proposes for "adequate" penalties for "wrongful processing" to ensure deterrence.

Conclusion:

- To some extent, **start-ups such** as Paytm, Ola and Flipkart have enabled inclusion of most sections of the society to participate in **their digital products and services**.
- However, **quality of digitisation of government services** is sometimes pathetic. They are difficult to navigate even for digital-savvy urban users; not to mention, semi-literate or illiterate masses for whom it is supposed to be more beneficial.
- It is time governments took notice of this and improved their services and programmes for **digital inclusion of the society at large**.
- Instrumentally, a **firm legal framework for data protection** is the foundation on which data-driven innovation and entrepreneurship can flourish in India. Fostering such innovation and entrepreneurship is essential if India is to lead its citizens and the world into a **digital future committed to empowerment, experiment and equal access**.

16. POVERTY AND HEALTH

Introduction:

- **Poverty and poor health** worldwide are **inextricably linked**. The causes of poor health for millions globally are rooted in **political, social and economic injustices**. That's why it is so crucial to tackle the root causes of poor health as well as the symptoms.

Poverty increases your chance of getting ill because of:

- Poor nutrition
- Overcrowding
- Lack of clean water
- Harsh realities that may make putting your health at risk the only way to survive or keep your family safe.

Poor health increases poverty by:

- Reducing a family's work productivity
- Leading families to sell assets to cover the costs of treatment. This increases poverty and their vulnerability to shocks in the future.

Healthcare system for the poor and under-privileged:

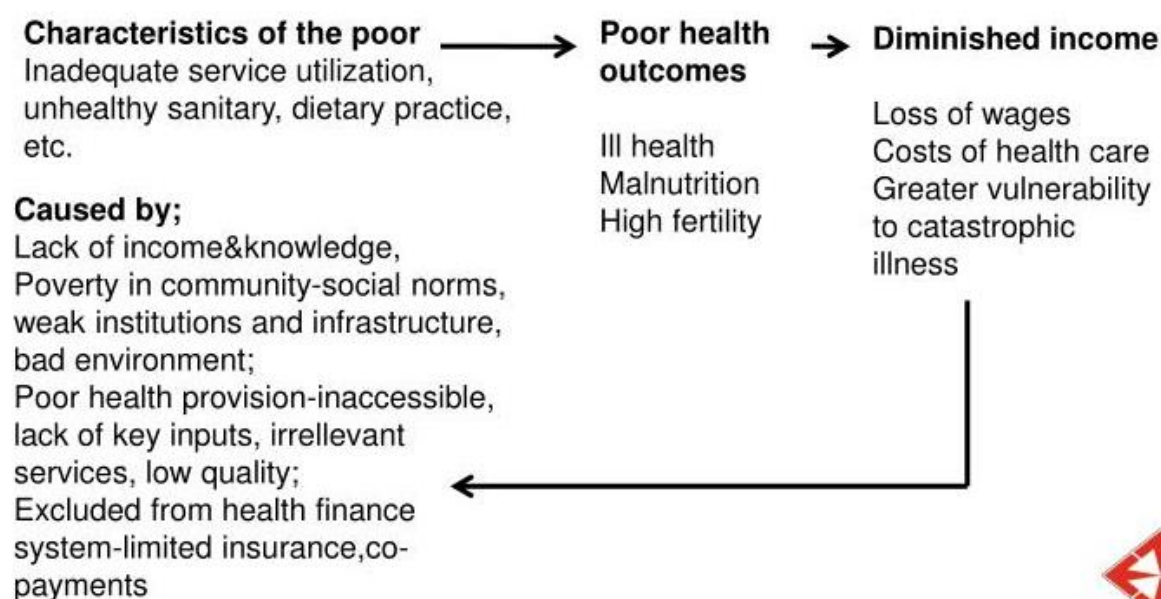
- The state of **India's healthcare system** is somewhat dichotomous — the country is a **global supplier of life-saving, affordable and good quality generic medicines**, yet lakhs of families are **driven into poverty** because they are forced to spend much of their earnings and savings on medications to treat **chronic and life-threatening diseases**.
- The poor, particularly, spend disproportionately large amount of their income as **out-of-pocket expenditure on healthcare**, mostly to buy medicines and this has been known to India's policy-makers for decades. Spending patterns of households on various items, including medicines and doctors, are routinely collected during the course of the **Consumption Expenditure Surveys by the National Sample Survey Organisation**.
- **The Health and Morbidity Surveys** of the same organisation too have been a rich source of information on expenses incurred by the population on treating various ailments and diseases that include cancers, cardiovascular diseases and diabetes.
- Now, a research paper published in the **medical weekly BMJ** has once again highlighted the sad condition of healthcare in India. It has estimated that about **5.5 crore people** were pushed below the poverty line between 1993-94 and 2011-12 by **out-of-pocket expenditure on healthcare**.
- Of further concern is that **medicine purchase** was the **single largest component** of OOP at 63 per cent and the rise in the proportion of population reporting any OOP payments to 80 per cent in 2011-12 from 60 per cent in 1993-94.
- This has also meant that the **share of healthcare expenditure** in the Indian households' consumption expenditure has risen from 4.8 per cent in 1993-94 to seven per cent in 2011-12.
- The Centre's intervention **to control prices** through **Drug Price Control Orders** has provided some relief in the past but with treatment protocols and drugs changing, that has not proved enough.

Quick stats:

- India's rank on Universal health care among 100 countries – **56**
 - People pushed to extreme poverty every year in India due to healthcare expense- **49 million**
 - Physicians per 1000 persons in India – **7**
 - Psychiatrists per 1,00,000 persons in India – **3**
 - Surgeons per 1,00,000 persons in India – **6**
 - Hospital beds per 10,000 persons in India – **6**
 - Percentage of people who spend at least 10 percent of their household budgets to pay for healthcare – **33**
 - India's expenditure on health care – **15 per cent of GDP**
- Although India has a public healthcare network ranging from primary health-care centres all the way to super-speciality hospitals, the **basic network is poorly equipped, under-staffed and overcrowded**, forcing people to look to private providers.
- Also, the **infrastructure is grossly inadequate** — India has less than one bed per 1,000 population and less than one doctor per 1,000 persons.

POVERTY AND HEALTH

Poverty and ill-health: the vicious circle



Ayushman Bharat – An attempt to transform India's Healthcare Map:

- **Innovative and path-breaking scheme** in the history of public health in India. It may have a transformative impact if implemented in an effective and coordinated manner.
- **Aim:** To make path-breaking interventions to address health holistically, in primary, secondary and tertiary care systems
- **Objective:** Prevention + Promotion (Health & Wellness)
- Full proof mechanism while allowing States to accommodate the existing schemes, keeping the flavour of Digital India intact.
- **AB-NHPM** will target about **10.74 crore poor**, deprived rural families and identified occupational category of urban workers' families as per the latest Socio-Economic Caste Census (SECC) data **covering both rural and urban**. The scheme is designed to be dynamic and aspirational and it would take into account any future changes in the exclusion/ inclusion/ deprivation/ occupational criteria in the SECC data.

Two major initiatives:**1. Health and Wellness Centre:** Foundation of India's health system

- 1.5 lakh centres will provide – comprehensive health care, including for non-communicable diseases and maternal and child health services, provide free essential drugs and diagnostic services
- The budget has allocated Rs.1200 crore for this flagship programme
- Contribution of the private sector through CSR and philanthropic institutions in adopting these centres is also envisaged.

2. National Health Protection Scheme:

- Will cover over 10 crore poor and vulnerable families (approximately 50 crore beneficiaries)
- Coverage of up to ₹5 lakh a family a year will be provided for secondary- and tertiary-care hospitalization (50 crore beneficiaries)

Conclusion:

- It is hoped that the **Ayushman Bharat Health Protection Mission**, announced in the current year's Budget and scheduled for **rollout on August 15**, will reverse the trend of rising OOP and increase access to **quality healthcare and medication** for the poor.
- Only a **universal health insurance programme**, or provision of healthcare at subsidised rates, can ensure that large numbers of people are not driven to poverty by **catastrophic medical expenses**. For this to happen, besides the cost of medicines, both the Centre and States have to address the **yawning gaps in India's healthcare infrastructure**.
- ❖ The **state and central agency** will keep an eye that system is not distorted. For a system of this magnitude in any country, strong monitoring and governance system is required. **Help of IT and artificial intelligence** will also be taken.
- ❖ Moreover, there should be a **link between institutions or hospitals, with health centres and the community as community engagement** helps in planning and implementation of programme. The success of this mission depends on its **design and execution**, as well as **top-down leadership** to ensure that the stated goals are met.
- ❖ This will lead to **increased access to quality health and medication**. In addition, **the unmet needs** of the population which remained hidden due to lack of financial resources will be catered to. This will lead to timely treatments, improvements in health outcomes, patient satisfaction, improvement in productivity and efficiency, job creation thus leading to **improvement in quality of life**.

17. WANTED, A NATIONAL RUBBER POLICY (NRP)**Introduction:**

- The long awaited release of the government's first ever report on a **national rubber policy (NRP)** has still not come out. Apparently, differences of opinion among members of the expert committee representing **various stakeholder groups** had been the major reason for withholding the document **for more than three years**.
- Meanwhile, mounting pressures from the Kerala Government and natural rubber (NR) producers' interests led to the constitution of a task force by the government to submit a **report for the revival of rubber sector**.
- Natural rubber is an **industrial raw material**. The growth of the farming sector is totally dependent on the health of the industrial sector which in turn faces global competition. The raw material should be available to the industry at a globally competitive price. There is a **steady decline in domestic production** of natural rubber and hence import of natural rubber cannot be banned without causing disruption to the rubber product manufacturing sector.

THE INDIAN RUBBER CONSUMPTION

- **Automotive tyres sector : 50 % (all kind of rubber)**
- **Bicycles tyres and tubes :15 %**
- **Footwear : 12 %**
- **Belts and hoses : 6 %**
- **Camelback and latex production :7%**
- **Other product :10%**

- Small and medium scale industrial units will turn unprofitable and large scale units may migrate to countries where the industrial climate is advantageous. The net result would be **loss of employment** both in the farming sector as well as industrial sector.
- Rubber sector has been an active participant in **India's export drive**. Rubber products worth around **Rs 20,000 crore** are being exported from the country annually which is more than 20% of the domestic rubber output.

Need of National Rubber Policy (NRP):

- Unfortunately, a consensus on the **need for a National Rubber Policy** remained elusive due to the conflict of interests arising from a higher regional concentration of Natural Rubber production vis-a-vis the diffused pattern of rubber consumption.
- The **strategic need** for evolving a NRP in India stems from the **unique characteristics** of the sector borne out of its evolutionary dynamics over time.
- The **emergence of India** as a major player in the **world rubber economy** had been unique for the **interconnectedness among the segments** rooted in the domestic market orientation that evolved under a protected policy regime since the early 1940s. This is in sharp contrast to the development of **export-oriented 'rubber enclaves'** in other major producing countries with the exception of China.
- In essence, the **domestic demand-driven interconnectedness** with limited exposure to export markets and external competition had been the **hallmark of India's rubber sector**.

NRP-A Gateway to boost Rubber Exports:

- The aim of the proposed policy would be to boost export and production of rubber, "keeping in mind farmers' interests".
- Developing a national rubber policy to address various issues concerning the sector with a view to boost shipment and productivity.
- This policy is necessary because there are so many challenges the sector is facing. There is a need to make sure that all issues are addressed through this policy.
- A task force comprising representatives of state and central governments has been constituted for suggesting short term-solutions and long-term strategies to address the issues.
- Major issues related to the sector include minimum support price for natural rubber, restriction on import, minimum import price, categorisation of natural rubber as an agricultural product, import of cup lumps, safeguard duty and increase in budget allocation to Rubber Board.
- Import of natural rubber is allowed only through sea ports of Chennai and Jawaharlal Nehru Port at Nhava Sheva, Mumbai.
- There are around 13.2 lakh rubber small holdings in the country, out of which around 9 lakh are in Kerala.
- India is deficient in both natural rubber and synthetic rubber production so import of raw materials is necessary to meet the needs of domestic manufacturing. Much higher import duties on raw materials such as natural and synthetic rubbers than on finished rubber goods have imp-acted the export competitiveness of the rubber sector in India.
- Import duty should be zero for the rubber and raw materials not being manufactured in the country. The proposed national rubber policy is still a work-in-progress. The meetings of the working group formed for framing national rubber policy are over. Different stakeholders have made their submissions.

Post LPG reforms, Rubber sector challenges:

- However, the **trade policy reforms** initiated since 1991-92 and the consequent exposure to foreign competition through the multilateral and RTA routes have changed the scenario. The **challenges of market integration** characterised by a surge in imports of rubber and rubber products are played out in the domestic market than in the export markets.
- It is the **unorganised smallholder rubber** and non-tyre segments that have borne the brunt of the **market integration process**. The volatility of NR prices and the fluctuations in farm income have hit the conventional farm management practices including replanting.
- One outcome this trend has been a steady growth in the **share of senile trees** (more than 50 per cent) in the total tapped area in the country. The negative growth rates in NR productivity in Kerala (- 2.8 per cent) and all India (- 2.7 per cent) between 2007-08 and 2016-17 show that the **policy prescriptions** have failed.
- Similarly, the **crisis-ridden non-tyre segment** has been hit by the volatile raw material prices and growth in imports.

- In 2016-17, India's negative balance of trade in rubber and rubber products was \$415 million. So the **segmented approach** has failed in addressing the challenges of the sector. Unlike other major NR producing countries the **export intensity of India's rubber sector** had been negligible. The estimated export intensity was only 22.5 per cent even during 2014-15.
- Hence, **sustaining a self-reliant rubber sector** having applications ranging from household articles to the space programme is a major policy challenge. Nevertheless, the need for a NRP looms large in the context of **market integration process sustained by the non-negotiable trade policy commitments** under the multilateral and regional pacts.

Conclusion:

- Though India has recognised the relevance of a **sustainable rubber sector** as early as 1942 there is no replicable model to address the challenges of market integration.
- China's '**Going Global**' strategy initiated in 2002 is a valuable template. The establishment of **China Natural Rubber Association in 2007** and the **Rubber Valley Project by China Industry Association in 2011** provided the institutional framework.
- India cannot afford the luxury of witnessing a gradual disintegration of its rubber sector built over the past seven decades for the sake of free trade.

Way Forward:

- A **comprehensive National Rubber Policy** is not only inevitable to recognize the **strategic importance** of sustaining a self-reliant rubber sector but also to **identify the inherent strengths** and accumulated weaknesses of the embedded structure to capture synergies in the **era of market integration**.
- The proposed national policy on rubber should reflect the real concerns of all stakeholders in the sector and **protect the livelihoods of rubber growers** in the country.
- It should also realized that **synthetic rubber is replacing natural rubber** on a large scale as it is available at competitive price. The government shall focus its attention on **enhancing productivity** in the farming sector by **investing in Research and Development**. Increased productivity alone can sustain interest of the farmers.

18. COUNTERING CHINA IN THE INDO-PACIFIC

Introduction:

- India appears to have **set a long-term plan** during which it will build its capabilities—economic and military strength, network of military facilities and agreements to access military facilities in countries **across the Indo-Pacific**, expanding economic and military ties.
- The **Wuhan summit** and Prime Minister Narendra Modi's speech at the **Shangri La Dialogue** in Singapore laying down **India's vision in the Indo-Pacific region** indicate that India is going to bide its time and avoid direct confrontation with China but will be proactive in **building various capabilities**.
- Japan, India, the US and Australia will also join **Rimpac (Rim of the Pacific) exercises** commencing in June. India and the US are planning to hold the **first two-plus-two dialogue** (between their foreign and defence ministers) in Washington on 6 July.

India: As a link between Indo-China border area and the East China Sea:

- Prime Minister Modi reiterated India's stand on need for open and secure seas and skies, freedom of navigation and a rules-based order which is under threat from China.
- India not taking military action in the Maldives despite a strong case to do so because of Chinese threats and playing down **China's build up in Doklam** in Bhutan after the disengagement last year is indicative that India does not want to get into a confrontation with China right now, though it may risk ceding strategic space to it.
- India is targeting a **sustained 7.5-8% economic growth** and aims to be a **\$5 trillion economy by 2025**. It plans to spend over \$250 billion in **military modernization** over the next decade. India is developing **robust military partnerships** across the Indo-Pacific, from getting access to military facilities to bilateral, trilateral and multilateral military exercises to training and capacity building of the militaries of friendly countries.

Developing infrastructure in countries of the Indo-Pacific region:

- Bangladesh has already chosen **Japan's Martabali port project** instead of China's Sonadia port project. If the Trincomalee port project—involving Japanese assistance—in Sri Lanka succeeds, then the importance of China's Hambantota port will decline.

- Similarly, the **Chabahar port project in Iran** can mitigate the importance of the Chinese Gwadar port in Pakistan. The **Asia-Africa Growth Corridor (AAGC)**, a result of Indo-Japanese cooperation, will also counter China's growing influence in Africa.
- India has secured access to **Duqm port in Oman** for military use and develop the **Agalega Island in Mauritius**. The Indian Navy has secured a **logistics facility in Singapore** that will allow it to refuel and rearm and has similar facilities in Vietnam. India's **recent logistics agreement** with France, just like the one with the US, allows it to access France's military bases across the Indo-Pacific.
- **India and Indonesia** are considering the development of a **port at Sabang** close to the Malacca Strait after the Indonesian minister for maritime affairs offered the port to India for military use. China was quick to warn India against militarization of the port.
- The **Andaman and Nicobar Islands** are strategically important. These islands are near the Malacca Straits, providing an excellent location for **tracking China's submarine activities**. India is **modernizing infrastructure** to deploy more and larger warships and planes in the Andaman and Nicobar Islands.
- In addition, Japanese investment in **India's strategic road project** in the latter's North-East region will help increase **India-South-East Asia trade**. There is a possibility that growing India-South-East Asia trade could reduce China's influence in South-East Asia.
- India has been conducting a number of **bilateral and multilateral military exercises**. The **Malabar naval exercises** with the US and Japan are the largest and the most complex series of naval exercises that India engages in, developing interoperability with two of the most powerful navies in the Indo-Pacific.
- **The Quad**, while not being given a military dimension yet, will be the most important grouping in the Indo-Pacific. It will have to **set an economic programme** to help smaller countries of the region. India will continue to expand its military exercises and develop bilateral and multilateral groups as Modi said at Shangri La.



ASEAN role in Indo-Pacific:

- Central to Modi's speech was the **Association of Southeast Asian Nations (Asean) unity**, which he said was essential for a **stable future for the region** and that Asean lies at the **heart of the new Indo-Pacific**. India's stress on the centrality and unity of Asean for securing the region and maintaining a rules-based order is important.
- A **united Asean backed by major powers** will be able to counter an expansionist China. It can ask for joint exploration and utilization of the **natural resources**, and a freeze on making **artificial islands** and their militarization. It will be a counter to China's own use of legal warfare as part of **its three-warfare strategy** on the legal, media and psychological fronts. India backing a united Asean in its dealing with China furthers its

own interests in the region, which has **abundant natural resources**, without getting into a direct conflict with Beijing.

- China, which is looking to expand its **footprint in the Indian Ocean**, will be forced to focus **more on South China Sea**. Smaller countries are susceptible to China if larger countries like India avoid confrontation. This can be offset if countries like India, the US and Japan work together to **build infrastructure** and provide **development assistance** to these countries to prevent them from falling under Chinese influence.

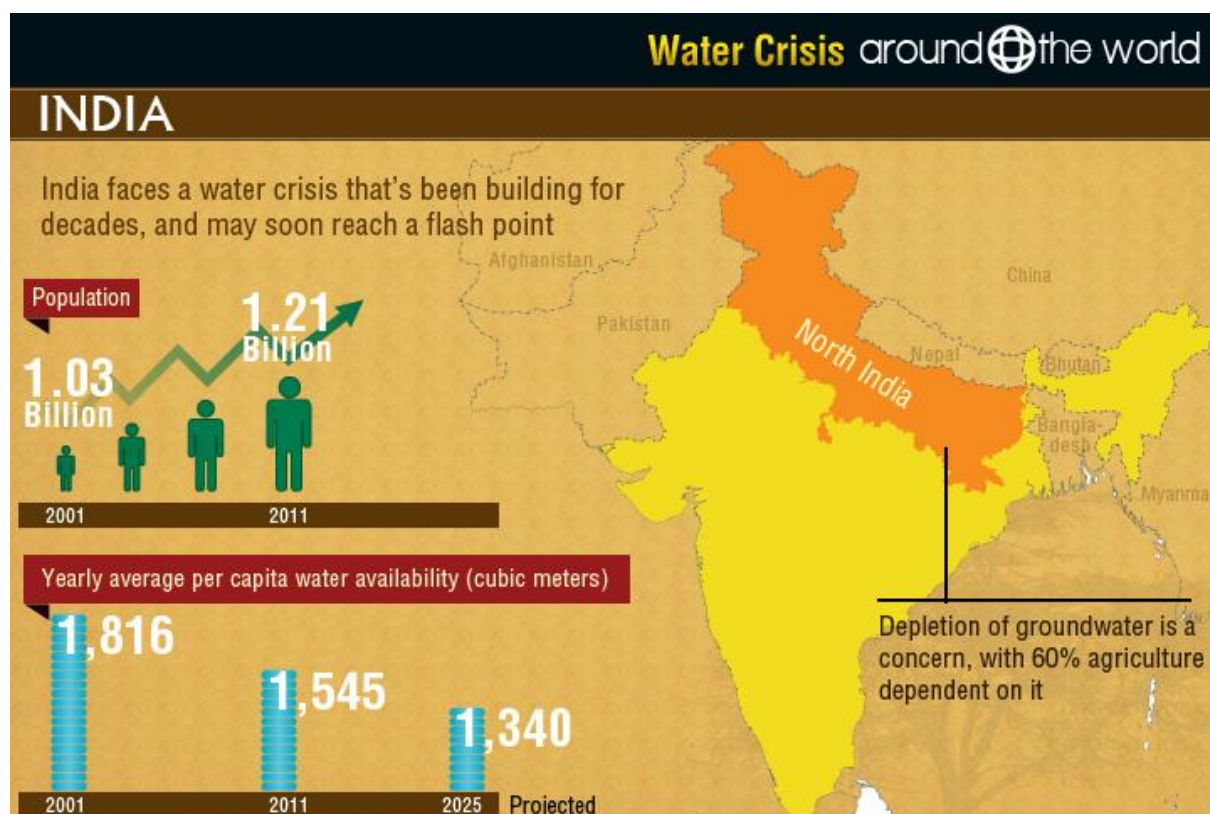
Conclusion:

- **Economically and strategically**, the global centre of gravity is shifting to the **Indo-Pacific**. If the region's stakeholders don't act now to fortify an open, rules-based order, the security situation will continue to deteriorate—with consequences that are likely to reverberate worldwide.
- Groups like ASEAN will have to **collectively approach** China. Standing up to it and physically **stopping illegal Chinese construction** will gain international attention and the sympathy and backing of major powers.
- **China's aggression and debt trap diplomacy**, which impinge sovereignty, is going to test Indian diplomacy. The various consultation groups will help India develop common strategies to keep the seas open and secure and preserve a rules-based order.
- With **joint military exercises**, India will develop **interoperability and standard operating procedures**, which will help in any joint military operation or even possibly a military alliance in the future.
- Nowadays, **further security cooperation** among Japan, India, the US and Australia is increasingly plausible. The time has come to proactively further this cooperation **to ensure prosperity and stability in the whole of Indo-Pacific**.

19. PARCHED OR POLLUTED: ON INDIA'S WATER CRISIS

Context:

- The **NITI Aayog** released the results of a study warning that India is facing its '**worst**' water crisis in history and that demand for potable water will outstrip supply by 2030 if steps are not taken.
- Nearly 163 million of India's population of **1.3 billion lack access to clean water** close to home, the most of any country, according to a **2018 report by Britain-based charity WaterAid**.
- **Nearly 600 million Indians** faced high to extreme water stress and **about 2,00,000 people died every year** due to inadequate access to safe water. Twenty-one cities, including Delhi, Bengaluru, Chennai and Hyderabad will run out of groundwater by 2020, affecting 100 million people, the study noted. If matters are to continue, there will be a **6% loss in the country's Gross Domestic Product (GDP) by 2050**.



India's water supply: 70% contaminated:

- Moreover, critical groundwater resources, which accounted for 40% of India's water supply, are being depleted at "unsustainable" rates and up to 70% of India's water supply is "contaminated".
- The NITI Aayog's observations are part of a study that ranked 24 States on how well they managed their water. Gujarat, Andhra Pradesh and Madhya Pradesh took the top three spots, in that order, and Jharkhand, Bihar and Haryana came in last in the 'Non-Himalayan States' category.
- Himachal Pradesh, which is facing one of its worst water crises this year, led a separate 8-member list of States clubbed together as 'North-Eastern and Himalayan.'
- Increased population pressure along with competing demand for water from different sectors (drinking, agriculture, industry and energy).
- The data published by the Central Water Commission indicate that agriculture alone accounts for about 85 per cent of all water use, mostly drawn from groundwater.
- A growing population, lack of adequate planning, crumbling infrastructure, indiscriminate drilling of borewells, large-scale consumption of water, and a false sense of entitlement in using water carelessly are causing water shortages.

Low performers in water management:

- Envisioned as an annual exercise, the **Composite Water Management Index (CWMI)**, to evaluate States, has been **developed by the NITI Aayog** and comprises 9 broad sectors with 28 different indicators covering various aspects of groundwater, restoration of water bodies, irrigation, farm practices, drinking water, policy and governance.
- **Poor water management techniques** are the important reason attributed for prevalence of water crisis in India. In last six decades the successive governments have not given enough importance for proper water management. The only thing that has been done is construction of dams. But very less emphasis has been given for **maintaining the quality and quantity of water** in such water bodies leading to present water crisis.
- **Droughts** are becoming more frequent, creating problems for India's rain-dependent farmers.
- At the same time, **disputes between states** are on the rise. **Inter-state disagreements** are on the rise, with seven major disputes currently raging, pointing to the fact that limited frameworks and institutions are in place for **national water governance**.
- Improper attention given to **management of watersheds** in the country. The **scientific way of managing water** from watershed is well tested for positive results. **Silting of wetlands** is also a problem, with periodic silting and degradation the water retention capacity reduces significantly and adds to the crisis.
- Another important issue that needs to be addressed, particularly in urban areas, is the **leakage of pipes providing water**. We cannot allow this to continue any longer. Putting in place an **efficient piped supply system** has to be top on the agenda of policymakers and planners.
- Although India receives an average rainfall of 1,170 mm per year, it is estimated that **only 6-7% of rainwater is stored**.

Reviving ancient systems of water harvesting techniques:

- Before the situation turns more alarming, we have to collectively act. We should remember that ancient India had well-managed wells and canal systems. In fact, our culture always believed in treating nature with reverence and most of our **rivers are considered sacred**.
- The Indus Valley Civilization had a **well-managed canal system**, while **Chanakya's Arthashastra** also talks of irrigation. In the ancient past, different types of indigenous **water harvesting systems** were developed across the subcontinent and such systems need to be revived and protected at the local level.
- **Micro irrigation practices** like drip and sprinkler systems have to be promoted in a big way for efficient use of water for agriculture. Both in urban and rural areas, **digging of rainwater harvesting pits** must be made mandatory for all types of buildings.

Conclusion:

- The government needs to **come up with solutions** like changing the cropping pattern which requires less water and rectify the mistakes that are being done over years.
- Other experts said that unless India woke up to its water crisis, disaster loomed. There is great awareness now about air pollution, however, India's water crisis need to get that kind of attention. We need to be **more responsible, sensible and prudent** when it comes to the use of water and in understanding the sentiments of the people.

- The government must give **higher MSPs to less resource-intensive crops** and fix its procurement policy. It must tell states that it will procure from their farmers if they keep water-productivity in mind; central procurement in Punjab should shift from paddy to, say, maize, while more paddy is procured from Bengal.

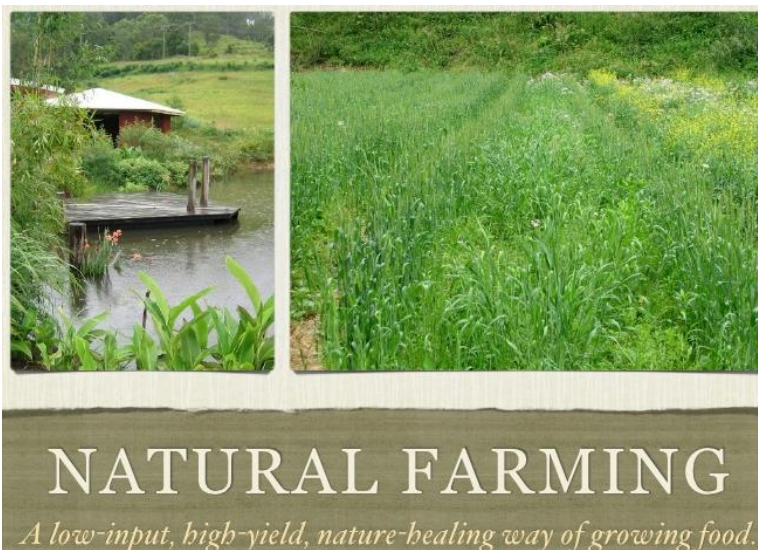
Way Forward:

- The government has come up with a Rs. 6,000-crore World Bank-aided **Atal Bhujal Yojana** with **community participation** to ensure sustained groundwater management in overexploited and ground water-stressed areas in seven States.
- There needs to have a **multidisciplinary approach** involving various scientists and ecologists to develope various **water management techniques** so that effective solutions are created than building dams and canals.
- We need to **connect with nature** to help rebalance the water cycle in a **sustainable and cost-effective way** by planting new forests, reconnecting rivers to floodplains and restoring wetlands. Governments, communities, the private sector, and researchers must collaborate.
- **Conscious efforts** need to be made at the household level and by communities, institutions and local bodies to supplement the efforts of governments and non-governmental bodies in promoting water conservation.
- **Sustained measures** should be taken to prevent pollution of water bodies, contamination of groundwater and ensure proper treatment of domestic and industrial waste water. **Reduce, reuse, and recycle of used water** must be the watchwords if we have to handover a liveable planet to the future generations.

20. THE SEEDS OF SUSTAINABILITY

Context:

- In early June, Andhra Pradesh Chief Minister N. Chandrababu Naidu announced that the State would fully embrace **Zero Budget Natural Farming (ZBNF)**, a **chemical-free method** that would cover all farmers by 2024.
- The Andhra Pradesh government's **unique initiative to improve farmers' livelihood** through zero budget natural farming (ZBNF) is the right solution to fight climate change in the **drought-prone Rayalaseema region**.
- The **Parliamentary Standing Committee on Agriculture** in its 2016 report in fact recommended "revision of the existing fertiliser subsidy policy and promotion of organic fertilizers".



Zero Budget Natural Farming:

- 'Zero Budget' means without using any credit, and without spending any money on purchased inputs. The word Zero Budget refers to zero net cost of production of all crops. This means that farmers need not purchase fertilizers and pesticides in order.
- It is considered 'zero budget' because the costs of the main crop are offset by the income that farmers earn from intercrops during the agricultural season

Aim of Zero Budget Natural Farming (ZBNF):

- The **main aim of ZBNF** is **elimination of chemical pesticides** and promotion of good agronomic practices. Many farmers, who were initially reluctant to take up ZBNF, have been practising it for two seasons now. There are some who switched over last year and has witnessed good results.
- This year, 5 lakh farmers will be covered, and **at least one panchayat** in each of the mandals will be shifted to this new method, bringing the programme to a tipping point. By 2021-22, the programme is to be implemented in every panchayat, with **full coverage by 2024**.
- It highlights the way to **improve the welfare of farmers**, reduce the cost of farm inputs, cut toxins in food, and improve soils. With successful pilot programmes that were initiated in 2015 and partners who brought

experience in different aspects needed to carry out such a transformation, **Andhra Pradesh** has become the **first State to implement a ZBNF policy**.

- Natural Farming proponent Subhash Palekar said all other practices like organic, chemical and vermi compost farming were “foreign practices” and **not suitable for Indian conditions**.
- The common farming practices have proved to have destroyed fertility, caused global warming and are responsible for large-scale migration of farmers from rural hinterlands to urban areas.

Benefits of Zero Budget Natural Farming (ZBNF):

- As both a **social and environmental programme**, it aims to ensure that farming – particularly smallholder farming – is economically viable by enhancing farm biodiversity and ecosystem services.
- It reduces farmers’ costs through eliminating external inputs and using in-situ resources to rejuvenate soils, whilst simultaneously increasing incomes, and restoring ecosystem health through **diverse, multi-layered cropping systems**.
- **Cow dung from local cows** has proven to be a miraculous cure to revive the fertility and nutrient value of soil. One gram of cow dung is believed to have anywhere between 300 to 500 crore beneficial micro-organisms. These micro-organisms decompose the dried biomass on the soil and convert it into **ready-to-use nutrients for plants**.
- **Resilient food systems** are the need of the day given the variability of the monsoons due to global warming and declining groundwater in large parts of India. The drought-prone regions in India is reportedly seeing promising changes already in farms with the ZBNF.
- Zero budget natural farming requires **only 10 per cent water** and **10 per cent electricity** than what is required under chemical and organic farming. ZBNF may improve the **potential of crops** to adapt to and be produced for evolving climatic conditions.

The four-wheels of zero budget natural farming require locally available materials:

- water vapour condensation for better soil moisture
- Seed treatment with cow dung and urine based formulations
- Mulching and soil aeration for favourable soil conditions.
- Ensure soil fertility through cow dung and cow urine based concoctions
- More encouraging is that the programme can have a positive effect on many of the **sustainable development goals** through improvements in soil, biodiversity, livelihoods, water, reduction in chemicals, climate resilience, health, women’s empowerment and nutrition.

Policy support needed in the following areas:

- There are no incentive official policies to promote ZBNF.
- A particular challenge is **Marketing**. Many farmers sell their natural produce as if were chemically grown, to private traders or at government wholesale yards, with no price differential. Other farmers rely on their own local marketing networks, such as to some organic shops and individual customers, **but policy support in this area is crucial**.
- The agriculture ministry plans to offer cash incentives to farmers who take up ‘yogik’ farming, ‘gou mata kheti’ and ‘rishi krishi’ is right step in promoting Zero budget natural farming in India.

Conclusion:

- As climate is changing, **creating resilient food systems** has become the need of the hour. Across the world, agriculture is **facing multiple setbacks**, be it in the form of extreme weather events like floods and droughts or factors such as soil degradation, soil salinity and water shortage.
- The implementation of this ZBNF project at large scale will impact a multitude of stakeholders, and also help India progress towards achieving **the Sustainable Development Goals (SDGs)** set by the United Nations (UN) to facilitate the post-2015 development agenda.

Way Forward:

- To feed the global population of **9.6 billion by 2050**, as projected by a United Nations report, **scaling up food production** is important. But ensuring food security, producing more with less resources and building the **resilience of smallholder farmers** are also important in creating a food-secure future.
- Technology is simply the **systematic application** of knowledge for practical purposes. The ZBNF is a **technology of the future** with a traditional idiom.

- Agricultural scientists in India have to **rework their entire strategy** so that farming is in consonance with nature. The dominant paradigm of chemical-based agriculture has failed and **regenerative agriculture** is the emerging new science.

21. COST OF THE MISSING WOMEN IN INDIAN POLITICS

Introduction:

- B.R. Ambedkar once said that “**political power is the key to all social progress**”. What, then, to make of the fact that India—a country where women suffer substantially greater **socio-economic disadvantages** than Western democracies like Spain—has a cabinet that is **only 22% female** and a Lok Sabha that has a **meagre 12% female representation**?
- “Our dream of New India is an India where women are **empowered, strengthened**, where they become **equal partners in the all-round development** of the country.” Prime Minister Narendra Modi said in his Mann Ki Baat.
- This represents the aspirations of millions of women in India; women who are not being restricted to participation in **India’s development trajectory** but are also leading it.

Constitutional provisions for women in Political Participation:

- The Constitution of India guaranteed justice-social, economic and political, liberty of thought, and equality to all citizens. Constitution provided for equality of women and called State to take measures to neutralize the socio-economic, educational and political disadvantage faced by women.
 - **Article 14:** It guarantees equality before law and equal protection of law with in the territory of India.
 - **Article 15:** It prohibits discrimination on the basis of religion, race, caste, sex, place of birth. According to article 15(3), State can make special provisions for the benefit women and children.
 - **Article 16:** Equality of opportunity for all citizens in matter relating to employment. No citizen can be denied employment on grounds of religion, race, cast, sex, decent, place of birth residence or any of them.
 - **Article 39:** Article 39(a) provides for an adequate means of livelihood for all citizen. Article 39 (b) has provisions for equal pay for equal work for both men and women. Article 39 (c) has provisions for securing the health and strength of workers, men and women, and not to abuse the tender age of children.
 - **Article 42:** It guarantees just and humane condition of work and maternity relief. Article 42 is in accordance with Article 23 and 25 of Universal Declaration of Human Rights.
 - **Article 325 and 326:** They guarantee political equality, equal right to participate in political activity and right to vote, respectively.
 - **Article 243 (D):** It provides for the political reservation to women in every panchayat elections. It has extended this reservation to elected office as well.
- In spite of the above provisions, participation of women in politics has not improved significantly. These are contradictory to the aims of the constitution. Given all this, the fact that the proportion of women in the Lok Sabha has seen only a paltry increase since independence—from 4.5% in the first Lok Sabha to the **current 12% in the 16th Lok Sabha (2014)**—is dispiriting.



What limits women representation?

1. Political parties in India tend **not to follow provisions** in their constitutions reserving seats for women in different committees
 2. The second barrier is **the lack of education and leadership training**
 3. Additionally, since women are **not integrated** in any local political process initially, and, unlike men, are not part of the relevant social and power networks, women leaders are prone to inefficiencies
- The **Economic survey for 2017-18** tabled in Parliament said **factors such as *domestic responsibilities, prevailing cultural attitudes regarding roles of women in society and lack of support from family*** were among main reasons that prevented them from entering politics.
 - “In a country like India with around 49 per cent of women in the population, the political participation of women has been low”.
 - The survey said there are developing countries like **Rwanda** which has **more than 60% women representatives** in parliament in 2017.

Political participation of Women in other countries:

- At the global level also, only a few countries have **equal participation of women** in par with men in politics. In countries like Germany, Sweden, Norway, Denmark and Finland, women’s participation in the **decision-making process is substantial**.
- Sweden with **47% female participation** has almost equal participation of women in Parliament followed by Cuba and Iceland.
- Women’s presence in parliament is **highest in Nordic countries (42.5%)**, followed by America (22%), Europe (19.5%), Asia (18%), Sub-Saharan Africa (18%), the Pacific (15%) and lastly in Arab states (9.4%).

Conclusion:

- The problems of **lack of education and leadership training** create a **vicious cycle** where socio-economic disadvantages lead to reduced opportunities for women to participate in the political process, leading to weakened representation—which, in turn, retards the process of addressing those **socio-economic disadvantages**. It’s a cycle that has been perpetuated for seven decades. It must be broken. There is a **pressing need for education and leadership training** to familiarize them with the **local government functioning** and instil in them a sense of agency.
- Women’s Reservation Bill which reserves **33% of seats for Indian women** at the legislatures has to be passed soon in the Parliament.

Way forward:

- Inclusive economic institutions and growth—both necessary for and dependent on social empowerment—require **inclusive political institutions**.
- Political parties should come forward to **increase women representatives**. The absence of critical mass of women representatives has pushed women to the fringes in power sharing and has adverse impacts on their overall political status.
- **Gender stereotypes** which perceive women as weak representatives should be changes through awareness and education. Efforts need to be taken to enhance the participation of **women in governance in large numbers**.
- **Women Panchayati members** have to be trained to analyse and understand their roles and responsibilities given in the 73rd amendment act.
- **Women’s leadership and communication skills** need to be enhanced by increasing female literacy especially in rural areas. They should be empowered in order to break socio-cultural barriers and improve their status in the society.
- “When we **empower the women in a family**, we empower the entire household. When we help with a woman’s education, we ensure that the entire family is educated... When we **secure her future**, we secure the **future of the entire home**.”— PM Modi.

22. TO REFORM THE EDUCATION SYSTEM

Introduction:

- Our Indian Education system needs **serious reforms and changes**. India needs reforms from **elementary itself**. The ideal choice of learning is **memorizing facts**. Here to judge the student's talent has only one factor i.e. percentage in board examination. So, students just mug up and undeniably Indian education is **spoon feeding**.
- There is **no hands-on knowledge** in our Education system. Our Education system mainly **emphasizes on theoretical knowledge**. Some basic theoretical knowledge is required however our Education system focuses more on the theoretical knowledge.



Indian Education system:

- The **Indian education and social arrangements** are very inflexible on kids and completely ignore their feelings, thoughts and ambitions. Kids are pressed to study from the age of 3. Non-performers are treated as dunces and detested by parents and society.
- As per UNESCO data, India has one of the **lowest public expenditure rates on education per student**, especially compared to other Asian countries like China.
- Education in most schools is **one dimensional**, with an **obsessive focus on marks**. Added to this is the lack of availability of trained teachers at all levels. **Quality teachers are the missing link** in the Indian education system. Although pockets of excellence exist, the quality of teaching, especially in government schools, does not meet the standards.
- With a **literacy rate of 77 percent**, India lags behind other BRICS nations, which have literacy rates above 90 percent. All these countries have better student-teacher ratios. So not only does India grapple with poor quality teachers, it also has fewer total teachers in comparison with other countries that do a better job at education.
- Data from the **Ministry of Human Resource Development** show that only half of all students who enter primary school make it to the upper primary level and less than half that get into the 9-12 class cycle.
 - **Only 58 percent** of children enrolled in classes three to five could read a class one text.
 - **Less than half (47 percent)** were able to do simple two-digit subtraction.
 - **Only half of the children** in classes five to eight could use a calendar.
 - They were not found proficient in **even basic skills**; about two-thirds of the students in class four could not master the measurement of the length of the pencil with a ruler.
- Study after study has shown that the true indicator of economic development in a country is the **education and wellbeing of its people**. Although, India has made rapid economic progress over the last three decades, one area that has not received enough attention is the quality of primary education.
- **Lack of good secondary and higher secondary schools:** The number of secondary schools is less than 150,000 for a country of 1.3 billion, and even this comes down to just 100,000 at the higher secondary level. While there are around five million primary school teachers, at the secondary level the number is just 1.5 million. India has persisted with a schooling system that has long failed its young.
- The **inevitable shift to private school education** along with the Right to Education Act represents a failure of the public-school system.

Where Education planning is Fails in India:

- We have a **messed-up education system** and have had one in place since Independence. Our first mistake was to **not expand primary and secondary education** for the aam aurat; instead, we proceeded to build temples of wisdom for the elite (higher education in general, IITs in particular). Just for clarification — the objection is not to expand higher education, but to its expansion at the expense of **providing basic education to all**.
- One mistake has fed into another to yield madness at every corner. The children of the poorest of the poor, the ones most discriminated against on the basis of caste or religion, **did not receive basic quality education**, so they could not proceed to higher education. The ones that were able to go to school — and they did so in poorly-staffed government schools — did not receive quality education, and therefore were **not able to compete** with the rich kids when it came to college.

Cost of Education at various levels:

- India must be one of the very few countries in the world (along with its Subcontinental neighbours) where the **average good quality high school education costs more than five times** the average good quality college education. In most civilised economies, the ratio is the opposite.
- At present, there are close to **5.5 lakh students studying abroad**, with over 2,00,000 in the US alone. Average tuition cost in a US college (state and private) is Rs 0.2 crore a year. For 2,00,000 students that is an **expenditure of Rs 40,000 crore**. Assume that the average tuition cost for the remaining 3.5 lakh individuals is half that of the US.
- Total expenditure on tuition, by Indians studying abroad, comes to a **total of Rs 75 thousand crore**. The average duration of study of an Indian abroad is likely to be three years — hence, we arrive at a figure of about Rs 25 thousand crore spent by Indians abroad each student year. **The central government, spends approximately this same amount.**

Quality of Education-with the help of Technology:

- Technology has to be a primary part of the process. Technology allows us to adapt to teaching and assessment of **entirely new skills** that are very significant for the present century and that you cannot progress in a kind of traditional setting.
- But technology has to **work through teachers**. Technology can leverage prodigious teaching extremely. But **great technology doesn't replace poor teaching**. The challenge is to convey technology into the depiction in ways that translate into good teaching and learning. **This necessitates refined public policy, a long-term commitment, and a systematic approach.**
- Thus, it is high time that we take certain steps instantaneously so that not only the level of education is improved which will **enhance an individual's knowledge** but also it will in turn lead to the **upliftment of the country** that we really need and certainly India will become one of the **preeminent in terms of education** and soon it will be a developed nation. Hence, it can be rightly said that **Indian Education system requires serious reforms.**

Conclusion:

- Our education must be **all round developer**. It must be **based on creative** rather than memorizing. **Practical or Visualize education** must be promoted.
- It is time that India began viewing school education as a **critical strategic investment** and gave it the status of a **vital infrastructure project**. As all in-country efforts have failed, we should go in for a **radical overhaul of our educational infrastructure** with the help of countries that have an amazing record in **providing quality school education** — **Finland**, for instance. We can surely afford to pay for that.
- Providing universal quality education depends not on the performance of teachers alone but is the **shared responsibility of several stakeholders**: governments, schools, teachers, parents, the media and civil society, international organisations, and the private sector.
- If only India had begun **revamping school education** at the start of economic liberalisation, it would by now have had the **world's largest pool of well-educated** and highly trained workers. Fortunately, India continues to have the largest number of young people anywhere. By ensuring they get a **world-class education** over the next few decades, India will be well on its way towards becoming a **developed nation sooner than expected**.

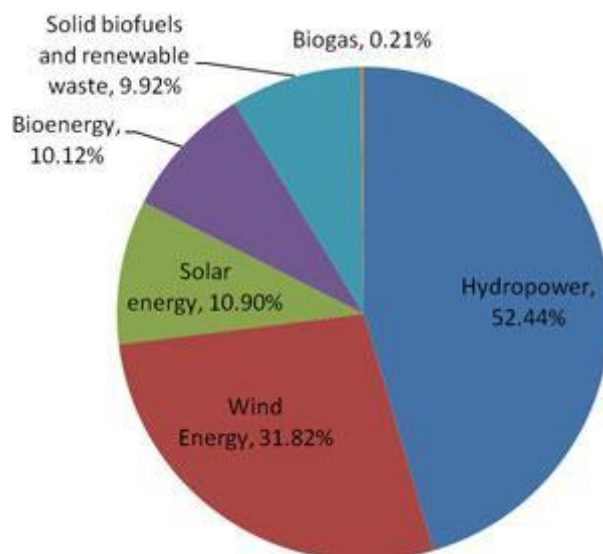
23. BUILDING INDIA'S GREEN FINANCE ECOSYSTEM**Introduction:**

- **With 300 clear sunny days, over a dozen perennial rivers and a coastline of more than 7,500 KMs**, India since the age of Puranas, had realised the importance of the sun and other sources of renewable energy and the power they possess for the benefit of its inhabitants.
- But as of now, this fact is not hidden from anyone that India is **the world's fourth-largest carbon emitter** with its population of 1.3 billion people with power sector contributing majorly to the same. But in the recent years, India has made significant strides in the renewable energy space. The **Climate Change concern** across the Globe has further propelled the Government and Decision Makers to develop a **detailed blue print for clean and sustainable power for all**.

- Besides promoting phases of the solar parks plan and **powering public facilities** such as railway stations and stadia using solar power, the Centre should put in place arrangements that make it **easier for every citizen and small business to adopt rooftop solar**.
- This is crucial to achieving the overall goal of 100 GW from this plentiful source of solar energy by 2022, and to raise the share of renewables in the total energy mix **to 40 per cent in the next decade**.

Need for Building Green finance ecosystem:

- As part of the initial commitments to the Paris Climate Accord, India plans to reduce its carbon emission intensity – **emission per unit of GDP – by 33-35% from 2005 levels over 15 years**. It is working towards producing 40% of its installed electricity capacity by 2030 from non-fossil fuels. This would lead to a significant shift from coal-based power generation to renewable energy sources. To achieve these challenging statistics, it has to produce **100 gigawatt from solar, 60 gigawatt from wind, 10 gigawatt from biomass and 5 gigawatt from small hydropower by 2022**. By 2022, India's renewable capacity will more than double.



- According to the **World Bank, 70% of the global greenhouse gas emissions** comes from infrastructure development, construction, power plants and transport system operations. The **World Health Organization** projects that the number of deaths attributable to the harmful effects of emissions from key infrastructure industries will rise from the current **150,000 per year to 250,000 by 2030**. Therefore, the challenge before developing economies is: how to modernize societies, build quality infrastructure and provide efficient transportation services while **minimizing the damage to the environment**.

Green Projects: Only Solar or Wind Energy?

- Let's not confine the "green projects" status only to solar or wind energy. Sustainable land use, water and urban waste management, green buildings, clean transportation, pollution prevention and control systems, and energy efficiency projects are some of the areas that are globally eligible to receive green financing.
- The **electric vehicles play a complementary role** to biofuels, which represent 80% of growth in renewable energy consumption in transport. However, it said the share of renewables in total **road transport energy consumption** remains limited, increasing only from 4% in 2016 to almost 5% in 2022.
- With **success of electric vehicles**, there can be a situation where **road transport** is free of fossil fuels. There can be a **situation of carbon free economy**. India has to think and act strategically and try in leapfrog in forefront. Leapfrogging also helps in **creating domestic manufacturing** capacity. For now, India's most of solar equipment are imported from china. However, India produces wind power which cannot satisfy adequate energy needs.

Green Bonds: Gateway for Environment-friendly Investment:

- Today, **green bonds help companies** tap money from specialized funds focused on climate change. As of now, **120 institutional investors from nine countries** have joined the Institutional Investors' Group on Climate Change. Also, over 1,500 institutions are signatories to the **United Nations' Principles for Responsible Investments**.
- Sovereign funds like GIC, Abu Dhabi Investment Authority, and multilateral agencies such as International Monetary Fund, International Finance Corp. and Asian Development Bank, among others, are **proactively channelling funds to invest in green sustainable projects**.
- These global institutions believe in **growing responsibly** and, hence, are committing funds to mitigate the impact of climate change and avail business opportunities associated with the transition to a **lower-carbon society and economy**.
- According to the **International Energy Association**, to limit climate change to 2 degrees, **CO₂ emissions must fall by 70% in aggregate by 2050 in Asia**. For this to fructify, **emissions from the power industry**, for example, should **reduce by 85%**.

Green Bonds in India:

- India's green bonds market is still nascent. The **country's first green bonds** were issued as recently as 2015. Cumulatively, India has raised over \$6 billion via green bonds, of which one third were issued in 2017.
- **China was the top green bonds issuer in 2017** with a 22% share, followed by the US (13%) in the \$120 billion global market. Our internal research is bullish on green bonds. We believe that **green bond issuances in Asia** will cross \$600 billion over the next five years. Demand for green financing continues to be high from international investors and it is in India's interest to develop a **strong green financing ecosystem**.
- In India, banks and non-banking financial companies have traditionally been the primary sources of **green infrastructure funding**. But they have a **limited appetite** for long-term debt due to **asset-liability mismatch**. Also, the current regulatory restrictions allow insurance companies and pension funds to invest only in AAA-rated bonds.
- This **regulatory framework** should change in order to provide a fillip for green bond issuances. To deepen the green bonds markets in India, the government should actively consider **making them tax-free**. Tapped astutely, the **Smart Cities project** can attract huge capital from these bonds.
- A **conducive and transparent regulatory environment** can unlock the full potential of green financial strategies in India, helping the country achieve its Paris Climate Accord targets.

Conclusion:

- The status of energy sector in India has been **highly uneven** and the scope of reforms in many areas still exist. There is a **need for a comprehensive energy policy**.
- Subjects such as need for unified energy policy, requirement of seismic data sets and encouragement of biofuels, improving gas supplies, setting up of gas hub and regulatory issues were discussed.
- **India's rising energy demands** and the need to connect millions who are still without power will not be possible only through intermittent renewable energy and phasing out coal power units. A **major shift towards renewable energy** will render some thermal power plants idle and investment in these plants will be wasted as it no longer will be possible to recover any returns from them.

Way Forward:

- To achieve a consistent round-the-clock power supply and green energy ecosystem, considerable **improvement in the operational efficiency** of distributors through extensive and intensive change **management** and **capacity-building programmes** as well as strengthening of the electricity sub-stations and sub-transmission network are required.
- "At the same time, **electricity must be priced rationally** and the tariff structure is simplified".
- **Decentralized renewable energy solutions** such as mini-grids and rooftop solar, where the grid can't reach or reliably serve, and operating together is the **most sustainable last-mile solution** to reach consumers and **achieve universal access to energy**.
- Going green" is no longer jargon but an **imperative of the times we live in**. All stakeholders—the government, companies/ banks, individuals—must **collectively own the responsibility** to conserve the environment for our future generations.

24. THE TOOLS FOR COUNTING**Brief History of Caste Census:**

- As the **2011 Census** approached, demands for **inclusion of data on caste** in Census reached a crescendo. P. Chidambaram, the Union Home Minister at the time, was opposed to **collecting caste data** and **blocked it** by claiming that it was logistically impossible for the Census, but the Government included the caste subsequently, through BPL Census, later renamed as **Socio-Economic and Caste Census (SECC, 2011)**. It resulted largely in unusable data.
- Consequently, if we want information regarding the **size and characteristics of various castes in India**, we must continue to look to the **Census of 1931**.

Outcome of SECC Data:

- It is hard to imagine that the **2021 Census** will not face another slew of demands for **collection of caste data**. It also seems likely that once again there will be a situation of **unprepared for a full caste census**.

- If we really want to collect data on caste in India and not let the discourse about Indian society be shaped by the political exigencies of colonial India, **the time to plan is now.**

An ongoing argument

- Colonial Censuses, beginning with the **first Census in 1871**, included questions about caste and used these data to divide and conquer India by first privileging Brahmins as **interpreters of Indian culture** and then targeting them as the roots of **caste-based oppression and inequality.**
- G.S. Ghurye, the early 20th century pioneer of Indian sociology, reacted sharply by identifying this passion for **classification as the source of anti-Brahmin movements.** Veena Das, doyenne of modern Indian anthropology, also notes that the **colonial Censuses** via the process of recording caste generated a conception of community as a **homogeneous and classifiable community** and thereby influenced the **processes of political representation.** Consequently, post-Independence Censuses have shied away from including questions about caste.

What is at stake?

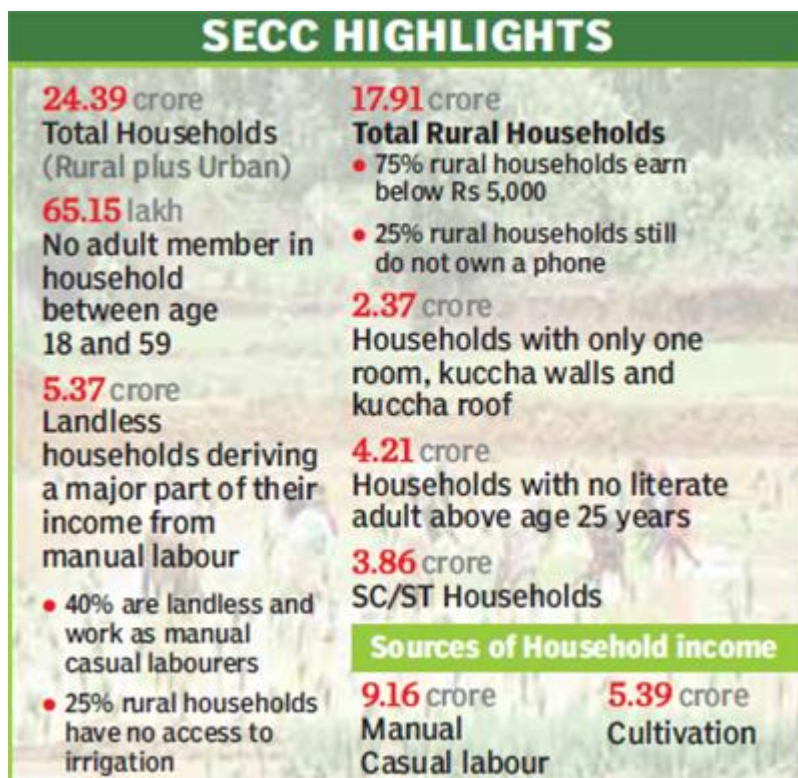
- Our political systems, civil society and courts continue to assume that broad caste-based social categories — Dalits, Adivasis, Other Backward Classes (OBCs) and upper castes — defined largely **using data from 1931 Census** and a few special purpose surveys continue to shape economic conditions in 21st century India.
- **Without accurate data at a granular level** for each of these categories consisting of thousands of *jatis* (castes) and *upjatis* (subcastes), we have no way of knowing whether this is correct.

Present day Indian Society:

- Indian society has undergone a **tremendous transformation** since 1931. Land ownership that bolstered the power of upper castes has lost its hold. **Land fragmentation** and decades of **agricultural stagnation** have turned many upper caste landowners into marginal farmers barely eking out a subsistence.
- While landlessness, once the bane of Dalit existence, has left the landless better poised to take **advantage of rising rural wages**, particularly construction wages. Consequently, while at a broad brushstroke the National Sample Survey (NSS) shows that **mean consumption expenditure** of forward castes is higher than that of Dalits, clusters of poverty persist among forward castes.

The present-day reality in our country:

- Modern India is facing **several challenges** in spite of not giving credence to the caste census. Patels, Gujjars, Jats and Marathas is the recent example, where **demands are coming for reservations.** Karnataka politics centres around Lingayat and Vokkalika communities. Similar situation **exists in several states**, whether they are Yadavas, Kurmis, Kammas, Kapus, Reddys, Vanniyars etc.
- The challenge for modern India lies in figuring out whether **caste-based political mobilisation** and **strong sentiments for or against reservations** would disappear just because we choose not to collect statistics about caste.
- Economic growth of the past century, combined with strong affirmative action undertaken by successive governments of the independent nation, may have changed relative fortunes of various groups.
- **According to NSS data, the bottom fourth of forward castes are poorer than the top half of Dalits.** India Human Development Survey shows that 56% of Dalit children ages 8-11 cannot read but neither can 32% of forward caste and 47% of OBC children. Hence, **it is time to collect data that reflects the current situation.**



Way Forward:

- However, we have **nearly three years** before the Census of 2021 and are fortunate to have **data from the SECC and technologies rooted in machine learning** at our disposal.
- It would be possible to **set up an expert group** that uses the SECC data in conjunction with other data sources such as matrimonial advertisements and State-specific Scheduled Castes/OBC lists to make a **comprehensive list of castes** and condense them into **meaningful categories via machine learning tools**.
- These categories could then be validated by domain experts from the Indian Council of Social Science Research (ICSSR) institutions in various States to come up with a **district specific list of castes** that would cover more than 90% of individuals in any given district.
- Interviewers could **use this pre-coded list** to allow respondents to self-classify with a small residual group's responses being **recorded verbatim** and categorised later. This is very similar to the technique through which **occupational and industrial classification systems** are created.

Conclusion:

- **Collection of data on castes** is inherently risky. Politicians have long realised the advantages and disadvantages of capitalising on the **sense of relative deprivation** among various groups.
- However, once the SECC was conducted, the genie was out of the bottle. Demands are already rife for the release of these data. Conceding that these data are flawed and looking for **better ways of collecting data on caste** may be a way of calming the waters before the 2019 election.
- It will take **courage** for a future government to **collect data on caste** and to use it to **rationalise reservation policies**. However, without **better and more current data**, our discourse on **caste and affirmative action** remains dominated by decisions made by the colonial administration.

25. FOR NUTRITION SECURITY: ON UNDERNOURISHMENT**Context:**

- The UN's *State of Food Security and Nutrition in the World report for 2017* has important pointers to achieve **Nutrition policy reform**. At the global level, the five agencies that together produced the assessment found that the gains achieved on **food security** and **better nutrition** since the turn of the century may be at risk.
- Although absolute numbers of people facing hunger and poor nutrition have always been high, there was a **reduction** in the **rate of undernourishment** since the year 2000. That has slowed from 2013, registering a worrying increase in 2016.

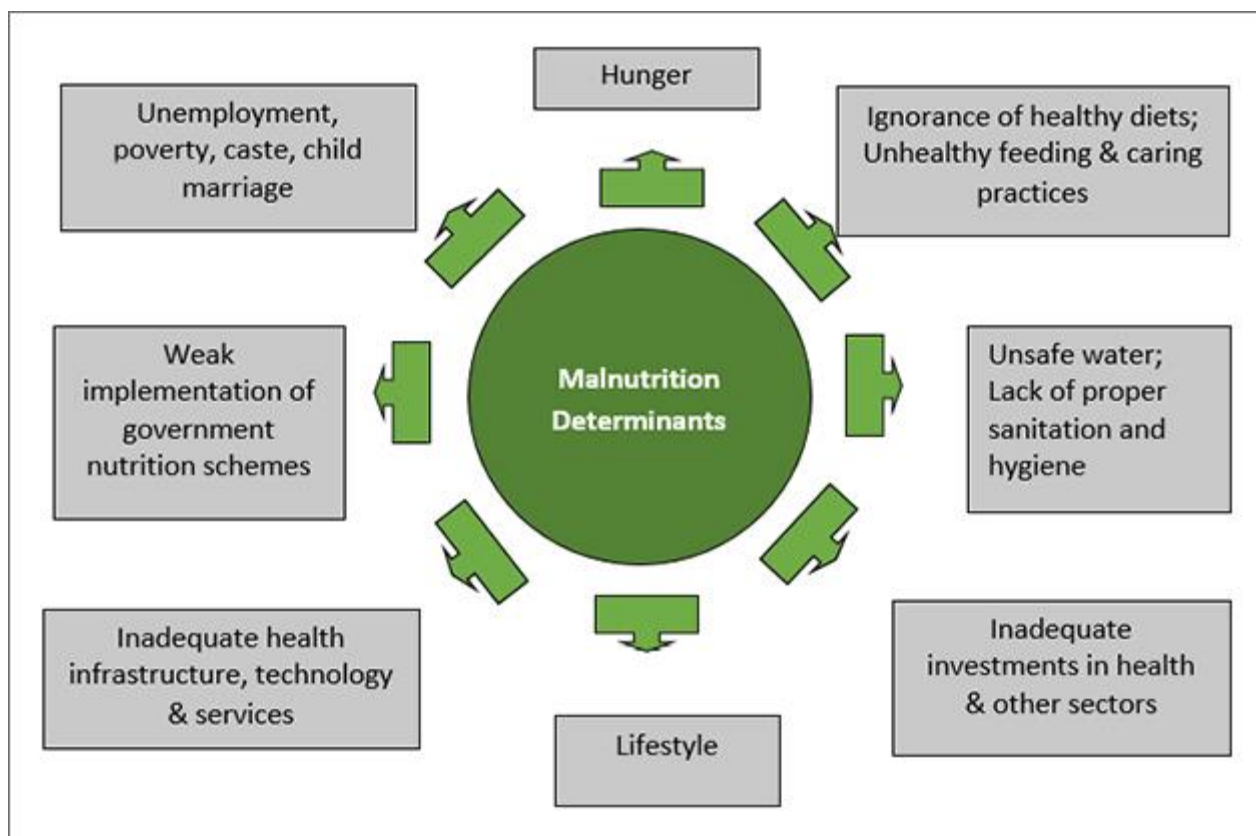
Malnutrition: A Global Epidemic:

- The estimate of **815 million people enduring chronic food deprivation** in 2016, compared to 775 million in 2014, is depressing in itself, but more important is the finding that the deprivation is even greater among people who live in **regions affected by conflict and the extreme effects of climate change**. In a confounding finding, though, the report says that child under-nutrition rates continue to drop, although **one in four children is still affected by stunting**.
- These are averages and do not reflect the disparities among regions, within countries and between States. Yet, the **impact of the economic downturn**, many violent conflicts, **fall in commodity export revenues**, and **failure of agriculture** owing to drought and floods are all making food scarce and expensive for many. They represent a setback to all countries trying to meet the **Sustainable Development Goal on ending hunger and achieving food security and improved nutrition**.
- What is more, the Centre recently said it had received **only 3,888 complaints** on the public distribution system (PDS) over a **five-year period**. All this shows that the Centre and State governments are woefully short on the commitment to **end undernourishment**.

Malnutrition in India: A Snapshot

- The **state of hunger and malnutrition in India** is worrying. Statistics compiled by the Food and Agricultural Organisation (FAO) show that while the Sub-Saharan countries of Africa have the highest prevalence of hunger, in absolute terms, India has the **highest number (one quarter) of undernourished (hungry) people** in the world (194.6 million or **15 percent of India's total population** during 2014-16).

- Hunger and undernourishment lead to severe problems. **Children and youth** in this state suffer from numerous nutritional deficiencies which adversely impact their overall health. In India, data for 2015-16 show the following:
 - **38 percent** of children below five years (urban: 31%, rural: 41%) are **stunted** (low height for age);
 - **25.6 percent** (urban: 23%, rural: 23%) are **wasted** (low weight for height);
 - **36 percent** (urban: 29%, rural: 38%) are **underweight** (low weight for age);
 - **2 percent** were **overweight** in 2006 (above normal weight for height); and
 - **58 percent** of children aged between 6 and 59 months (urban: 56%, rural: 59%) are **anaemic**.
- Malnutrition in children under-five also results in nearly **half of the 1.3 million deaths occurring in the country each year**. Among India's adolescents, the proportion of overweight and obese was estimated at 11 percent and two percent, respectively, in 2007. Data on anaemia show that 56 percent of young girls and 30 percent of young boys in the age group of 15-19 years are anaemic.



Much more vulnerable in Tribal areas:

- According to NFHS 2015-16, **every second tribal child** suffers from growth restricting malnutrition **due to chronic hunger**. Such acute food insecurity in tribal households is due to a **loss of their traditional dependence** on forest livelihood and the **State's deepening agrarian crisis**. Besides these, systemic issues and a weakening of public nutrition programmes have aggravated the problem.
- For example, **20% of tribal families** did not receive rations (public distribution system) in Vikramgad (in Palghar, Maharashtra) as they did not have a card.
- India's efforts at improving access to **food and good nutrition** are led by the **National Food Security Act**. There are **special nutritional schemes for women and children** operated through the States. In spite of such interventions, **14.5% of the population suffers from undernourishment**, going by the UN's assessment for 2014-16. At the national level, **53% of women are anaemic**, Health Ministry data show.
- Further, **nutrition interventions and tracking progress** cannot be done without sufficient information and reliable, updated data, and the operationalisation of a **national nutrition surveillance system**. Thus, there exists the need to collect and maintain real-time data on various nutrition indicators **using ICT and GIS**.

Conclusion:

- Institutions such as the **State Food Commissions** have not made a big difference either. Distributing **nutritious food** as a **public health measure** is still not a political imperative, while ill-conceived policies are making it difficult for many to do this. The **report on nutritional deficiency** should serve as an opportunity to evaluate the **role played by the PDS** in bringing about dietary diversity for those relying on subsidised food.

- A critical aspect of nutrient adequacy is “**diet diversity**”, calculated by different groupings of foods consumed with the reference period ranging from one to 15 days.
- **The Energy and Resources Institute (TERI)**, being a **multidisciplinary organization** committed to **sustainable development**, has made a humble effort to help achieve this by designing and implementing a replicable model that includes optimal use of **easily available minimal local resources** incorporating traditional knowledge while encouraging communities to **inculcate the best nutritional practices**.

Way Forward:

- It is recommended that each person should **have diverse diet of at least eight food groups**, that include: cereals, roots and tubers; legumes and nuts; dairy products; flesh foods; eggs; fish; dark green leafy vegetables; and other fruits and vegetables.
- This **low dietary diversity** is a proxy indicator for the household’s food security too as the children ate the same food cooked for adult members. It is time the government looks at the **root cause of the issue** and finds a **sustainable solution for tackling malnutrition**.
- This is possible only when the state focusses on **inclusive development** by creating employment opportunities for the marginalised which would **improve their purchasing power**, diversify their diet and, in turn, **reduce malnutrition**.
- In a report issued two years ago on the role played by rations in shaping **household and nutritional security**, the NITI Aayog found that families below the poverty line consumed **more cereals and less milk** compared to the affluent. Complementing rice and wheat with **more nutritious food** items should be the goal.

RSTV, LSTV, AIR - SYNOPSIS

1. POKHRAN II

- Link: <https://youtu.be/uc6nmVkSuBg>
- India completed 20 years of its journey as a nuclear power on 11 May 2018. The nuclear test on Pokhran was conducted by then Prime Minister Mr. A.B. Vajpayee. It was greeted with jubilation in India while it proved to be a surprise for rest of the world which reacted by putting several sanctions to India in the coming years. But, India has now not just overcome the international obstacles, it has been successful in striking nuclear deal with the United States. It also got a waiver from the Nuclear Suppliers Group and became members in 3 out of 4 Multilateral Export Control Regimes.

Analysis:

- Pokhran II refers to India's second round of nuclear tests that were conducted in Pokhran, Jaisalmer, Rajasthan. It was codenamed 'Shakti' which means 'power'.
- The tests were conducted in 5 explosions which involved a fusion device, a hydrogen bomb (thermonuclear) and 3 tests of miniaturised weapons.
- The 1998 tests were conducted in collaboration of Defence Research and Development Organisation (DRDO) and Department of Atomic Energy (DAE). Indian Army had raised a special unit of scientists for the purpose.
- By the successful tests in Pokhran II, India displayed a few things. It showed its technological capability to the world and also the secrecy of its operations as no international agency or satellite could get a hint that the tests were being conducted.
- This led India into the nuclear powers club. Although India became the sixth nuclear power state after United States, Soviet Union, Britain, France and China in 1974 itself, but Vajpayee's statement after the Pokhran II formalised the status.
- India had conducted its first nuclear test on 18 May 1974 in Pokhran in an operation codenamed 'Smiling Buddha'.
- In 1974, India had conducted peaceful nuclear explosion which was allowed in international law. This had been done by many countries. Thus, purpose of 1974 test was technology demonstration and not weaponization. But, the purpose of 1998 test was weaponizing India's capabilities.



Map of Rajasthan showing location of Pokhran

Timeline of India's development to a nuclear state:

- Efforts towards building a nuclear bomb, infrastructure and research on related technologies were undertaken by India since World War II.
 - **1944:** India's nuclear physicist Homi Bhabha persuaded Congress to harness nuclear energy.
 - **1945:** Tata Institute of Fundamental Research was established.
 - **1950s:** Preliminary studies were carried out at BARC on plans to produce Plutonium and other bomb components.
 - **1962:** India faced heavy casualties in Sino-India war.
 - **1966:** India's nuclear program was consolidated.
 - **1974:** India's first nuclear test 'Smiling Buddha' was conducted.
- After the wars with its neighbouring nations- China and Pakistan- **strengthening national security** became essential for the Indian Government.
- Although the Pokhran II tests made **India face obstacles in terms of economic, military and international isolation**, it was a timely success that made **India breaking the nuclear monopoly of five nations**.

There are 4 Multilateral Exports Control Regimes:

- **Wassenaar Arrangement** on Export Controls and Dual Use Goods and Technologies. India became its member in 2017.
- **Nuclear Suppliers Group (NSG)** for the control of nuclear related technologies. India has got a waiver in 2008, but its permanent membership in NSG is not supported by China.
- **Australia Group (AG)** for control of chemical and biological technology that could be weaponised. India became its member in 2018.
- **Missile Technology Control Regime (MTCR)** for the control of rockets and other aerial vehicles capable of delivering weapons of mass destruction. India became its member in 2016.

India's nuclear doctrine has been:

1. Credible minimum nuclear deterrence.
2. Never use nuclear weapon first.
3. Never use nuclear weapons against non nuclear nations.

Way Ahead:

- ✓ Since the formation of India's Atomic Energy Commission in 1948, **India's nuclear power** has managed to reach only **6780 MW with 22 nuclear reactors**. But **with NSG membership** and subsequent opening of the market, **India will be able to achieve 60,000 MW power by 2030**.
- ✓ While the US, Japan and Germany have supported India's bid for India's NSG membership, **China remains the biggest obstacle**. China should reconcile itself to India's growing role in the world and look at a very positive nuclear doctrine India has.
- ✓ Thus, starting from the tests of Pokhran which led India to isolation, **with NSG membership India would be a member of all the four Multilateral Export Control Regimes**.

2. SCO SUMMIT

Link: <https://youtu.be/-SNK8kp8z9w>

- **PM Modi** is attending **18th SCO summit in Quingdao, China on 9th June 2018**. This is the first SCO summit that **India is attending as a full time member**. The 2 days summit is expected to see India raise concerns on **terror networks** and favour effective **connectivity links to boost trade**.

Analysis:

- Shanghai Cooperation Organisation or **SCO** is a **Eurasian political, economic and security** organisation. SCO grew out of Shanghai Five founded in **1996** with **China, Russia, Kazakhstan, Kyrgyzstan and Tajikistan** as its original members.
- After the **disintegration of Soviet Union in 1991**, China has a large number of **undecided and disputed borders** with many of the countries that became independent then. This saw the formation of Shanghai Five by these nations.
- **Uzbekistan joined the Shanghai Five group in June 2011** and the group was henceforth named, Shanghai Cooperation Organisation. Its charter was signed in June 2002.
- **India and Pakistan joined SCO as full members in June 2017** at a summit in Astana, Kazakhstan.
- SCO is the **largest regional organisation in the world in terms of geographical coverage and population** and has become very powerful and influential.



Map showing member nations of SCO

Members of SCO in 2018:

- **8 member states:** China, India, Kazakhstan, Kyrgyzstan, Pakistan, Russia, Tajikistan and Uzbekistan.
- **4 observer states:** Afghanistan, Belarus, Iran and Mongolia
- **6 dialogue partners:** Armenia, Azerbaijan, Cambodia, Nepal, Sri Lanka and Turkey
- SCO was initially formed to secure relations about security. Countries were supposed to work together against terrorism, extremism and separatism. **Over the years it has become a comprehensive regional organisation.** Its goals have become more widened.

Main goals of SCO are:

1. Promoting mutual trust and neighbourliness.
 2. Promoting cooperation in politics, trade, economy, research, technology and culture.
 3. Enhancing ties in areas like education, energy, transport, tourism, environmental protection and healthcare.
 4. Maintaining and ensuring peace, security and stability in the region.
 5. Moving towards establishment of democratic, fair and rational international political and economic order.
- **Heads of State Council** is supreme decision-making body. It meets once a year and adopts decisions and guidelines on all important matters. **Heads of Government Council** is the second highest body. Meetings are also held at levels of **heads of parliament, ministers of foreign affairs, economy, transport, etc.**
 - **2 permanent bodies of SCO:** SCO secretariat, Beijing and Executive Committee of the Anti-Terrorist Structure, Tashkent.
 - PM Modi will be attending the meeting with Heads of States in both restricted and extended formats. He will also attend bilateral meeting with Xi Jinping. The meeting comes after an informal summit was held between both in **Wuhan in April, 2018** where wide range of discussions took place.
 - The SCO summit comes weeks after PM Modi addressed the **Shangri La dialogue** where he emphasised that Asia and world will have better future when India and China will work together with trust and confidence.
 - China which is the host nation is making its mark on **Artificial Intelligence**. It is the **intelligence demonstrated by machines**, in contrast to natural intelligence displayed by humans and animals. For example, a digital locker that can be operated by facial recognition has been provided for journalists.

India's focus areas in the summit are:

1. Fight against terrorism
 2. Increasing connectivity in the Central Asian region like increasing access to Afghanistan through Pakistan.
 3. Economic cooperation
 4. People to people exchanges
 5. Cultural harmony and cultural exchange.
- Focus of SCO Summit, 2018 is **regional peace and security of Central Asian countries**. Other focus areas are Belt and Road initiative and Korean peninsula issues.
 - The SCO summit comes in the backdrop of trade war between US and China, fresh sanctions against Russia and cancellation of nuclear deal between US and Iran.
 - The relations between **India and China have been marked with border disputes and even a war**. But, India was also the first non-communist country to recognise People's Republic of China (PRC) in 1949. India and China had won independence at almost the same time.

Timeline of India China relations after India's independence:

- **15 Aug 1947:** India became independent.
- **1 Oct 1949:** People's Liberation Army defeated the Nationalist Party in China.
- 30 Oct 1949: India recognised PRC
- **1950:** First Indian Ambassador was sent to China
- **1954:** China and India signed the Panchsheel document taking the relations to a new level.
- But, China's stand on Tibet came as a disappointment to Nehru and his vision of peaceful coexistence.
- **3 April 1959:** India granted asylum to Dalai lama after China's annexation of Tibet.

This led to relations taking a bad turn. In 1950s, India China border disputes and conflicts started with China beginning to occupy Indian territories on India-China borders.

- **20 Oct 1962:** China launched a massive attack on India which resulted in India's defeat. **The relations further deteriorated in 1960s and 1970s till India and China agreed to re-establish their diplomatic ties in 1976.**
- **1988:** PM Rajiv Gandhi visited China and several agreements were signed.
- **2004:** India and China proposed to open up Nathula and Jelapa passes in Sikkim.
- **2004:** Bilateral trade between both surpassed \$10 billion mark for the first time.
- **Trade between both the nations have boosted in the coming years but, border disputed have also taken place.**

Conclusion:

- The SCO which had started with a group of Five members has expanded and included India and Pakistan in 2017.
- **Its goals and objectives have also widened from security to economy and other areas.**
- For India, it is a very good opportunity to boost its ties with Central Asian countries and improve its relations with China as far as possible.

3. S 400 AIR DEFENCE SYSTEM

- Link: <https://youtu.be/GTVTfRTHF4Q>
- **India** has recently completed negotiations on a Rs 40,000 crore **deal to buy S-400 Triumph air defence systems from Russia.** India wants the missile system to **tighten its air defence mechanism** against both China and Pakistan. But, the **United States** which is emerging as a strong ally at present times, has **strong reservations against the Indo-Russian deal.**



Analysis:

- **Missile defence** is a system, weapon or technology involved in detection, tracking, interception and tracking of attacking missiles. The **United States, Russia, China, India, Israel and France** have all developed such air defence systems.
- **Surface-to-air missile** is a missile designed to **destroy aircraft** or other missiles. **Attempts** to develop them **started during World War II** and first operational systems were **introduced in 1950s.**
Examples: Nike Ajax and Patriot (United States), S-75 (Soviet Union), S-300 (Soviet Union and later Russia), etc.
- The **Cold War** saw **Soviet Union and America** locked in an arms race. **Both tried to establish supremacy in nuclear warfare and state of arts arsenal.** Russia was the part of Soviet Union that developed fighter and bomber aircrafts like MIG, TU and SU series. They were fast, strong and durable.
- Meanwhile in **United States** companies like **Lockheed Martin and Boeing** developed fighter aircrafts that were **superior in terms of technology and range.** Both countries developed **3rd, 4th and 5th generations of fighter aircrafts.** But, Soviet Union could not surpass America and so it was forced to further develop its interceptor aircrafts.
- **US** is bordered by **oceans on both the sides.** So, defence features of its **ballistic missile which are of high ranges** are different from what India requires. While, **Russia is a continental power** and it has requirement of both the **long-range ballistic missile threat neutralisation as well as aircraft attack.** Same is the **case with India.**

A list of surface-to-air missiles by countries is:

Country	Surface-to-air missile
China	TY, HQ series, Sky Dragon, QW series, etc
France	Masurca, AS-20, Roland, etc
Germany	Roland, IDAS and LFK NG
India	Akash, QRSAM, Barak 8, Trishul, Pradyumna, Ashwin and PDV Ballistic Missile Interceptor
Israel	Arrow, Barak and SPYDER
Pakistan	Anza
United States	FIM, MIM, CIM, RIM, series and Terminal High Altitude Area Defence (THAAD)
USSR/Russian Federation	2K series, 9K series, S-200, S-300, S-400 and S-500
North Korea	KN6

Russia's Defence arsenal:

- **1967: Soviet Union** developed **S-200 Angara Air Defence System**, capable of targeting most advanced aircraft or missile. It is in service even today.
- **1978: Soviet Union** developed **S-300 Air Defence System**, an upgrade to S-300. This long range surface-to-air missile is still in use today.
- **1991: Soviet Union was dissolved**, officially granting self-governing independence to the Republics of Soviet Union. Thus, **15 independent republics** like Russia, Armenia, Latvia, Turkmenistan, etc were formed. **Russia got a major chunk** of weapons and defence technology of Soviet Union.
- Russia continued to make weapons better and stronger.
- **2007: Russia** deployed **S-400 Air Defence System**. It is considered **most advanced Air Defence System** in the world today.
- Russia is **developing S-500 defence system**, likely to be deployed **by 2020**.
- **NATO countries** objected strongly to reports of Russia giving its systems to Iran and Syria. Russia has now offered its highly advanced Air Defence System to India, which has agreed to purchase five of S-400 Air Defence Systems. Before India, Russia has only sold this system to China even though Iran, Saudi Arabia, Qatar, Belarus are eyeing it also.
- This is the first time that Russia is providing a different system to India, a departure from its tradition of supplying only attacking weapons.
- **India and Russia** have several major **joint military programmes** including:
 1. **Brahmos** cruise missile programme
 2. **5th generation fighter jet** programme
 3. **Sukhoi SU-30 MKI** programme, etc.
- Various military hardware purchased/leased from Russia include:
 1. **S-400 Triumph** (purchase pending)
 2. **T-90S Bhisma**, a 3rd generation Russia battle tank
 3. **INS Vikramaditya** aircraft carrier programme, etc.
- **India** needs high end weapons for very valid reasons. It is the only country in the world that is **flanked by two nuclear armed neighbours**– Pakistan and China. It has fought wars with both of these.
- But the **United States has raised concerns of India purchasing S-400 system**. It is objecting on two counts. The official count is that US has a legal position where any country that is taking systems or military equipment from there adversaries, the **US expects to put sanctions** on that country. The other count is that **US is planning to put F 16 factories in India and sell drones** to it.

- **India maintains close military relations with both United States and Russia.** But over the years, Russia has been the largest supplier of military weapons to India. In 2012-2016, Russia (68%), US (14%) and Israel (7.2%) were the major arms suppliers to India.

About S-400 Air Defence System:

1. It was deployed in 2007 in Russian Army.
 2. It is among the best air defence systems.
 3. It is based on a multifunctional system that can drop missiles at different speeds.
 4. It can target aircrafts (up to 5th generations), cruise and ballistic missiles by supersonic and hypersonic missiles of the system.
 5. It can address the incoming targets at a range of 400 kms and a height of 30-40 kms.
 6. It can neutralise 36 targets at one time in the range of 400 kms.
 7. Its radar detection system has a range of 600kms and can target 100-300 targets.
 8. It has 12 launchers equipped with missiles which can be launched within 5 minutes.
- The **S-400** Air Defence System will give **India the power to secure its land and air boundaries.** Its unique system makes it indispensable against Pakistan and China and will also protect it from their nuclear threats. Its deployment in a way makes it impossible for enemy missiles to enter Indian air space.
 - **India** will be able to secure a **nearly 4000 km long boundary line with China.** It will be easy to track activities of Chinese army in Tibet.
 - India can track activities of Pakistani Air Force in Afghanistan. Its system will cover Pakistan's entire air base.

Conclusion:

- India is the second largest market for Russia's defence industry. Russia is the chief supplier of defence equipment to India.
- With threats always a possibility from both China and Pakistan, India needs to keep its defence systems strong. Purchase of S-400 Air Defence System will help India in keeping its land boundaries and air space more secure and shall be looked forward to.

4. ARTIFICIAL INTELLIGENCE IN INDIA

- Link:
- **NITI Aayog** has joined hands with **Google** to promote the growth of **artificial intelligence** and a **machine learning ecosystem in India.** Artificial intelligence is a **fascinating concept of science** using which scientists have now been able to develop **computer systems that can perform human-like tasks.** These tasks include speech recognition, translation into different languages, visual perception and even decision.

Analysis:

- From the early days of human civilization efforts have been made to replace human hands with machines to make lives easier.
- Human beings then started looking beyond machines, developing robots and other advanced technologies that could just read the human mind and do the required work.
- Intelligence is the ability to take variables from our senses and to process certain decisions using the brain. Artificial intelligence helps a machine in doing the same. Such a system has a receptor, sensors (to pick data from environment), a memory (that tells what to do depending on what signal it gets), and then it takes a decision that will communicate to another device.

Examples/Applications of Artificial Intelligence:

- **Autonomous vehicles** like drones and self-driving cars
- **Robotics**, widely used in modern factories.
- **Search engines** like Google search
- Online assistants like **Siri** in Apple mobile phones and **Alexa**
- **Image recognition** in photographs
- Posting of stories and advertisements on social media sites like Facebook.
- Artificial Intelligence includes **Machine Learning** and other technologies.

For example:

- **Natural Language Processing** gives machines the **ability to read and understand human language**.
 - **Machine perception** is the ability to use inputs from sensors (cameras, microphones, etc) to deduce aspects of the world. This helps in **speech, facial and object recognition**.
- ❖ The term Artificial Intelligence was first coined by **American scientist John McCarthy in 1955**. Over the years improvement in technology, algorithms, computing power and storage power has made the concept realistic.
- ❖ This can be termed as the **fourth Industrial Revolution**. Each cycle of the Industrial Revolution **changes the lives of the common man in unpredictable ways**. This has already helped in improvements like in healthcare making surgeries of eye easier, predicting floods and droughts, etc.

Stages of Industrial Revolution:

Industrial Revolution	Timeline	Remarks
First	18 th to 19 th centuries	It took place in Europe and America. It made the mostly agrarian and rural societies industrial and urban. Example- Iron and textile industries and steam engine.
Second	1870 to 1914 (just before World War I)	Growth and expansion was made in steel, oil and electricity sectors. Major technological advances included the telephone, light bulb and internal combustion engine.
Third	1980s onwards	Also called Digital Revolution, it includes the personal computer, internet and information and communication technology (ICT).
Fourth	Phrase first used in 2016, by World Economic Forum	It includes robotics, artificial intelligence, nanotechnology, quantum computing, biotechnology, The Internet of Things (IoT), 3D printing and autonomous vehicles.

Types of Artificial Intelligence:

- **Reactive Machine AI:** Cannot use past experiences to decide future actions.
- **Limited Memory AI:** They have a limited memory and work on both pre-programmed knowledge and past experiences.
- **Theory of Mind AI:** The machine itself is capable of interpreting the world around it. Information can be reproduced when needed based on observation made.
- **Self-Awareness:** It is the **most advanced** form of Artificial Intelligence, which is not developed yet. These machines can interpret the world around them and also possess consciousness, feelings and emotions.

In Indian Context:

- The partnership between think tank in India NITI Aayog (National Institute for Transforming India) with Google to develop India's artificial intelligence ecosystem will help to improve healthcare, education, agriculture, transportation, develop innovative governance systems and improve overall economic productivity. This will also help in promoting entrepreneurs associated with it, research in the field in premier institutions like IITs and providing crash course to students across India.
- **Disadvantages:** Development in such advanced technologies affects employment opportunities also as machines can do the work of many labours. Whether they can compete with a human brain is also a question.

Conclusion:

- ✓ **India** is already making **progress in computing technologies** with its **Digital India** campaign in the recent past. Now taking a step towards Artificial Intelligence brings with it various new applications. But the drawbacks of using them are also predicted and how it will design our future is to be seen.

5. THE SCIENCE OF MONSOON

- List:
- Monsoon** is the **lifeline of Indian economy** as 2/3rd of it depends on farm income and rain is the only **source of irrigation** for over 40% of the country's cropped area. Over 70% of India's annual rainfall occurs in **July-September monsoon season**. A **good monsoon increases crop productivity**, raises farm income and drives the economy while, a weak monsoon inflates food prices and harms the economy.

Analysis:

- The word "monsoon" is derived from **Arabic word *mawsim*** and/or **Hindi *mausam***.
- Monsoon refers to the **seasonal reversing wind accompanied by precipitation**. It occurs due to a difference in temperature between the landmass and the ocean. Major monsoon of the world are **West African and Asian-Australian monsoons**.

In Indian context:

- Southwest monsoon/ Indian monsoon: Indian subcontinent has a **large heated landmass** during the summer months (April to September), and a **cooler water mass** in the form of **Indian Ocean**. This causes a **temperature difference**, which creates a **pressure gradient** and **drives moisture laden winds** over Indian subcontinent. Impact of this monsoon is felt in India, Sri Lanka, Bangladesh and Myanmar and as far north as in **China's Xinjiang**. It has two branches:
 - The Arabian Sea branch: It first **hits the Western Ghats and Kerala** gets the first rain in India. It causes rain in the **coastal areas of Konkan and Goa** as it moves northwards, but eastern part of the Western Ghats do not receive much precipitation.
 - The Bay of Bengal Branch: It picks up moisture-laden winds **from Bay of Bengal** and moves **towards North-East India and Bengal**. The Himalayas act as a barrier for them and thus, rain occurs in Indo Gangetic plains, Meghalaya, etc.
 - Northeast monsoon/ Retreating monsoon: The cycle is reversed during colder months (October to April). **Wind blows from cooler landmass** (Himalayas and Indo-Gangetic plain) **towards Indian ocean** (south of Deccan). This causes precipitation over the oceans and in regions like **Tamil Nadu**.

Theory of Monsoon:

- During summer months** in the Northern Hemisphere, the **ITCZ** (Intertropical Convergence Zone) **shifts North, pulling southwest monsoon winds** onto the land from the sea. Huge landmass of the **Himalayas restricts the low-pressure zone** onto the Himalayas themselves. **When Tibetan plateau heats up more** than the Himalayas, the ITCZ abruptly and swiftly shifts North. This **leads to bursting of monsoon rains** over the Indian subcontinent.
- A **reverse shift** takes place for the **Northeast monsoon winds** causing minor rainfall over the **eastern Indian Peninsula** during the **Northern Hemisphere winter months**.
- The rainfall caused due to Southwest monsoon is a type of **orographic rainfall**. It occurs when masses of air are pushed by wind upwards along the side of elevated landforms. This results in adiabatic cooling and ultimately condensation and precipitation. Along the leeward side rain shadow is observed.

Other types of Monsoons:

- Asian-Australian Monsoon: It stretches from **North Australia to Russian Pacific coast** and stretches into Indian ocean.
- North American Monsoon: Warm, moist airs from **Gulf of California** blowing northeast and from **Gulf of Mexico** blowing northwest **meet over Sierra Madre Occidental mountains in central Mexico**. This brings moisture to the mountain ecosystem and continues North to **Arizona, New Mexico and Texas**.
- Southwest monsoon** accounts for over **80% of rainfall in India**. Monsoon impacts Indian economy- **agriculture, industry and society** as a whole. It brings respite from heat and transforms large part of semi-desert areas into green land. **Crops specially like cotton, rice, oilseeds, and coarse grains** depends heavily on rains.
- Monsoons are often associated with conditions like '**El Nino**' (Spanish for 'Little Boy') that occurs every 2 to 7 years and **La Nina**. It is caused by unusual warming in Eastern tropical Pacific Ocean and reversal of prevailing

winds in the region. El Nino can trigger above average rains in northern Peru & draught in Southeast Asia, Australia and India.

Conclusion:

- Thus, **monsoon which causes rainfall** every year in India due to changing wind directions **drives its economy** and its timely and adequate occurrence is very important.
- But, reports of floods and draughts in different regions of the countries due to their **erratic patterns in recent past is a cause of concern** and, effects of climate change on its changing patterns needs to be studied.

6. POWERS OF GOVERNOR & LT GOVERNOR

- Link: <https://youtu.be/shE9LfVLxqU>
- On **20 June 2018** the state of **Jammu and Kashmir** was placed under **Governor's rule** after the BJP withdrew support to its alliance partner PDP, forcing Chief Minister Mehbooba Mufti to resign. This is the eighth spell of a Governor ruling the state of J&K, and the fourth such incident under NN Vohra. But unlike Jammu and Kashmir, **in all other states** in the event of **failure of constitutional machinery**, the **President's rule is imposed**.

Analysis:

- Democracy is the system of government in which citizens have the powers to choose representatives from among themselves to form a governing body.
- During the British rule, India was centrally ruled by one Government- Crown rule/ direct rule in India. Also, India was divided into provinces. But the Constitution makers decided to make dual sets of governments– the national and state governments.
- India is a country that has both states and Union Territories (Article 1). Unlike states that have their own government, Union territories are ruled directly by the Union Government. The Lt Governors/ Administrators in the Union Territories have similar powers and functions at the state level as the President of India at Union Level.
- Articles 153 to 167, Part VI deals with the state executive.
- **State Executive = Governor + Chief Minister + Council of Ministers + Advocate general of the state.**
- Governor is appointed under **Article 153**.
- **Governors are not elected by the people** and, so their role was debated in the Constituent Assembly. But, they were considered important in situations of **constitutional crisis** and for **bridging the gap between the centre and the state government**.
- Unlike states, **Union Territories are ruled directly by the Union Article 239 to 241, Part VIII** deal with the Union Territories.
- **Article 239** says that **every Union Territory in India** shall be **administered by the President** of India, to such extent as he thinks fit, through an **administrator to be appointed by him**. It is called **Lieutenant Governor** in Andaman and Nicobar Islands, Delhi and Puducherry. Thus, Lieutenant Governor is an administrator and not a constitutional head like governors of states.
- In a **federal system**, the **Governor** of a state is the **ceremonial head of the state executive** and has the rights to be kept informed of the decisions of the state ministry. But **criticisms** of the Governor are:
 1. Governor is an agent of the Centre.
 2. Power tussle between Lieutenant Governor and elected government becomes intensified in Union Territories like Delhi.
- His post is considered ceremonial.
 - Governors are appointed for political manoeuvrability and represent the centre.
 - Their power is often misused to form or dissolve the state governments.
- **Governor plays two roles:**
 - Constitutional head of the state.
 - Representative of Central Government.

Powers and privileges of Governor in India:

1. **7th Constitutional Amendment Act, 1956:** A Governor can be **appointed for more than one state**. Example- Governor of Punjab is concurrently the Administrator of Chandigarh.
 2. **Article 164(1):** Power to **appoint the Chief Minister**.
 3. **Article 165:** Governor **appoints other heads of the state-** State Advocate General, chairman of the public service commission and other members.
 4. **Article 243:** Governor **appoints state's election commissioner and finance commissioner**.
 5. He is consulted by the President for appointing judges of High Courts and has other judicial powers also.
 6. Governor's **decision is final** and cannot be questioned.
 7. Governor can **recommend President's rule**.
 8. **Article 174:** Governor convenes, dissolves state legislature.
 9. **Article 200:** No bill in the state can be passed without governor's assent.
- The **Governor's rule in Jammu and Kashmir** is imposed for a period of **6 months (Article 92)** of Jammu and Kashmir's constitution). During this period, the **state assembly remains suspended** and the Governor may also dissolve the assembly.
 - **In all states in India**, except Jammu and Kashmir, the government's failure results in **President's rule**. It refers to the suspension of state government and **imposition of direct central government rule in a state** under **Article 356** of the Constitution.
 - **Jammu and Kashmir has a separate constitution** that provides for an intermediary statutory layer in the state. **Special provisions for Jammu and Kashmir** were made after '**Instrument of Accession of Jammu and Kashmir to India**' was signed by Pt Nehru and Maharaja Hari Singh on 26 Oct 1947:
 1. Special status under Article 370 (Autonomous status)
 2. It is the only state in India to have its own constitution that was adopted on 17 Nov 1956 and came into effect on 26 Jan 1957.
 3. Parliament cannot make laws on subjects mentioned in the state list.
 4. Residuary power lies with the legislature of J & K.

As per constitution of J & K:

- **Section 26(2):** The executive power of the state shall be vested in the Governor.
- **Section 46:** Legislature of the state = Governor + 2 Houses (Legislative Assembly and Legislative Council)
- **Section 92:** Proclamation of Governor's rule (Additional powers to governor). After the expiry of 6 months, Article 356 will come into force (President's Rule).
- The powers of Governors of states and Lt Governors or Administrators of Union Territories vary. For example- The Lt Governor of Delhi has more powers vested in him as compared to governors of states.
- A person to be appointed as a **Governor must be a citizen of India & < 35 years in age**. He must not be a member of either House of Parliament. He is appointed for a **term of 5 years**.
- In a **parliamentary system**, the **actual power lies with the Council of Ministers** with the Chief Minister at the Head. But **Governor** plays an **important role during a crisis situation**.

Conclusion:

- Although the existence of a Governor was debated in the Constituent Assembly and critics exist for his role but, the **Governor and Lt Governor** play a pivotal role in **running the constitutional machinery** of states and Union Territories especially during a crisis situation. Such a **situation has arisen in Jammu and Kashmir**, eighth time at present, and **Governor needs to play his role** effectively to **maintain Constitutional provisions and bring peace and stability in the region**.

